ภาคผนวก ค

ใบรับรองผลการตรวจวัดคุณภาพสิ่งแวดล้อม

ภาคผนวก ค-1

คุณภาพอากาศ

Analysis / Test Report

Client : Sukhumvit 59 Company Limited
10 Soi Sukhumvit 59 (Boonchana), Sukhumvit Road, Khlong Tan Nuea, Watthana, Bangkok Thailand 10110
P/O : สัญญาจ้าง
Project Name : Monitoring EIA
Project Location :

Lot ID: 2599672
Date Received : Nov 05, 2025
Date Reported : Nov 11, 2025
Report Number: 3436920-1

Sample Description Air Quality
Location บริเวณพื้นที่โครงการ (GPS 47P 0671002, 1517647)
Parameter Carbon monoxide (ppm)
Measurement Date Nov 03, 2025 - Nov 04, 2025
Measurement by Prommee Sripatnet

Time	2599672-1 Nov 03, 2025	-	-	-	-	-	-
10:00 AM - 11:00 AM	0.6	-	-	-	-	-	-
11:00 AM - 12:00 PM	0.6	-	-	-	-	-	-
12:00 PM - 01:00 PM	0.4	-	-	-	-	-	-
01:00 PM - 02:00 PM	0.4	-	-	-	-	-	-
02:00 PM - 03:00 PM	0.4	-	-	-	-	-	-
03:00 PM - 04:00 PM	0.4	-	-	-	-	-	-
04:00 PM - 05:00 PM	0.4	-	-	-	-	-	-
05:00 PM - 06:00 PM	0.5	-	-	-	-	-	-
06:00 PM - 07:00 PM	0.6	-	-	-	-	-	-
07:00 PM - 08:00 PM	0.8	-	-	-	-	-	-
08:00 PM - 09:00 PM	0.5	-	-	-	-	-	-
09:00 PM - 10:00 PM	0.4	-	-	-	-	-	-
10:00 PM - 11:00 PM	0.5	-	-	-	-	-	-
11:00 PM - 12:00 AM	0.4	-	-	-	-	-	-
12:00 AM - 01:00 AM	0.4	-	-	-	-	-	-
01:00 AM - 02:00 AM	0.6	-	-	-	-	-	-
02:00 AM - 03:00 AM	0.7	-	-	-	-	-	-
03:00 AM - 04:00 AM	0.6	-	-	-	-	-	-
04:00 AM - 05:00 AM	0.6	-	-	-	-	-	-
05:00 AM - 06:00 AM	0.6	-	-	-	-	-	-
06:00 AM - 07:00 AM	0.6	-	-	-	-	-	-
07:00 AM - 08:00 AM	0.7	-	-	-	-	-	-
08:00 AM - 09:00 AM	0.8	-	-	-	-	-	-
09:00 AM - 10:00 AM	0.7	-	-	-	-	-	-
Average	0.5	-	-	-	-	-	-
1hr - Maximum	0.8	-	-	-	-	-	-
Standard 1hr - Average	30	-	-	-	-	-	-

Standard : Notification of the National Environmental Board. No.10, 1995 (B.E.2538).
Reference Method : U.S. Environmental Protection Agency 40 CFR Part 50Appendix C

Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. The report shall not be reproduced except in full without the written approval of the laboratory.

Approved by

Saranya C.

Saranya Chalermthamrong
Scientist (4)

Analysis / Test Report

Client : Sukhumvit 59 Company Limited
10 Soi Sukhumvit 59 (Boonchana), Sukhumvit Road, Khlong Tan Nuea, Watthana, Bangkok Thailand 10110
P/O : สัญญาจ้าง
Project Name : Monitoring EIA
Project Location :

Lot ID: 2599676
Date Received : Nov 05, 2025
Date Reported : Nov 11, 2025
Report Number: 3436924-1

Sample Description Air Quality
Location บริเวณพื้นที่โครงการ (GPS 47P 0671002, 1517647)
Parameter Nitrogen dioxide (ppm)
Measurement Date Nov 03, 2025 - Nov 04, 2025
Measurement by Prommee Sripatnet

Time	2599676-1 Nov 03, 2025	-	-	-	-	-	-
10:00 AM - 11:00 AM	0.0154	-	-	-	-	-	-
11:00 AM - 12:00 PM	0.0111	-	-	-	-	-	-
12:00 PM - 01:00 PM	0.0102	-	-	-	-	-	-
01:00 PM - 02:00 PM	0.0118	-	-	-	-	-	-
02:00 PM - 03:00 PM	0.0098	-	-	-	-	-	-
03:00 PM - 04:00 PM	0.0223	-	-	-	-	-	-
04:00 PM - 05:00 PM	0.0387	-	-	-	-	-	-
05:00 PM - 06:00 PM	0.0465	-	-	-	-	-	-
06:00 PM - 07:00 PM	0.0525	-	-	-	-	-	-
07:00 PM - 08:00 PM	0.0193	-	-	-	-	-	-
08:00 PM - 09:00 PM	0.0175	-	-	-	-	-	-
09:00 PM - 10:00 PM	0.0211	-	-	-	-	-	-
10:00 PM - 11:00 PM	0.0140	-	-	-	-	-	-
11:00 PM - 12:00 AM	0.0167	-	-	-	-	-	-
12:00 AM - 01:00 AM	0.0311	-	-	-	-	-	-
01:00 AM - 02:00 AM	0.0311	-	-	-	-	-	-
02:00 AM - 03:00 AM	0.0303	-	-	-	-	-	-
03:00 AM - 04:00 AM	0.0251	-	-	-	-	-	-
04:00 AM - 05:00 AM	0.0244	-	-	-	-	-	-
05:00 AM - 06:00 AM	0.0309	-	-	-	-	-	-
06:00 AM - 07:00 AM	0.0330	-	-	-	-	-	-
07:00 AM - 08:00 AM	0.0338	-	-	-	-	-	-
08:00 AM - 09:00 AM	0.0304	-	-	-	-	-	-
09:00 AM - 10:00 AM	0.0252	-	-	-	-	-	-
Average	0.0251	-	-	-	-	-	-
1hr - Maximum	0.0525	-	-	-	-	-	-
Standard 1hr - Average	0.170	-	-	-	-	-	-

Standard : Notification of the National Environment Board No. 33, 2009 (B.E. 2552).
Reference Method : U.S. Environmental Protection AgencyMethod Part 50 App. F (Chemiluminescence)

Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. The report shall not be reproduced except in full without the written approval of the laboratory.

Approved by

Saranya C.

Saranya Chalermthamrong
Scientist (4)

Analysis / Test Report

TESTING
No.0009

Client : Sukhumvit 59 Company Limited
10 Soi Sukhumvit 59 (Boonchana), Sukhumvit Road, Khlong Tan Nuea, Watthana, Bangkok Thailand 10110
P/O : สัญญาจ้าง
Project Name : Monitoring EIA
Project Location :

Lot ID: 2599677
Date Received : Nov 05, 2025
Date Reported : Nov 13, 2025
Report Number : 3436927-1

Sample Number	2599677-1
Sampled Date	Nov 03, 2025
Sample Description	Air Quality
Location	บริเวณพื้นที่โครงการ (GPS 47P 0671002, 1517647)
Date Analysis Commenced	Nov 07, 2025
Barometric Pressure	758 mmHg
Atmospheric Temperature	31.2 °C

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
Particulate matter as PM 10	03/11/25 - 04/11/25	mg/m3	-	0.005	0.022	0.12	In - house method : STM 04-052 based on U.S. Environmental Protection Agency 40 CFR, method 50, Appendix J, revised as of July 1, 2008 (Include sampling)	NEB No.24	Bangkok
Total Suspended Particulate	03/11/25 - 04/11/25	mg/m3	-	0.005	0.033	0.33	In - house method : STM 04-051 based on U.S. Environmental Protection Agency 40 CFR, method 50, Appendix B, revised as of July 1, 2008 (Include sampling)	NEB No.24	Bangkok

Guideline :
NEB No.24 : Notification of the National Environmental Board. No.24, 2004 (B.E.2547) dated September 22, 2004
Sampled By : Prommee Sripatnet

Remark :
- LOD : Limit of Detection
- "<" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)
- Analyte(s) marked * is/are not included in scope of Accreditation ISO/IEC 17025.

Approved by
Saranya C.
Saranya Chalermthamrong
Scientist (4)

Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. The report shall not be reproduced except in full without the written approval of the laboratory.

Analysis / Test Report

Client : Sukhumvit 59 Company Limited
10 Soi Sukhumvit 59 (Boonchana), Sukhumvit Road, Khlong Tan Nuea, Watthana, Bangkok Thailand 10110
P/O : สัญญาจ้าง
Project Name : Monitoring EIA
Project Location :

Lot ID: 2599678
Date Received : Nov 05, 2025
Date Reported : Nov 17, 2025
Report Number: 3436930-1

Sample Description Air Quality
Location บริเวณพื้นที่โครงการ (GPS 47P 0671002, 1517647)
Parameter Total Hydrocarbon (ppm)
Measurement Date Nov 03, 2025 - Nov 04, 2025
Measurement by Prommee Sripatnet

Time	2599678-1 Nov 03, 2025	-	-	-	-	-	-
10:00 AM - 11:00 AM	2.95	-	-	-	-	-	-
11:00 AM - 12:00 PM	2.19	-	-	-	-	-	-
12:00 PM - 01:00 PM	2.91	-	-	-	-	-	-
01:00 PM - 02:00 PM	2.51	-	-	-	-	-	-
02:00 PM - 03:00 PM	2.44	-	-	-	-	-	-
03:00 PM - 04:00 PM	2.42	-	-	-	-	-	-
04:00 PM - 05:00 PM	2.58	-	-	-	-	-	-
05:00 PM - 06:00 PM	2.49	-	-	-	-	-	-
06:00 PM - 07:00 PM	2.85	-	-	-	-	-	-
07:00 PM - 08:00 PM	2.64	-	-	-	-	-	-
08:00 PM - 09:00 PM	2.62	-	-	-	-	-	-
09:00 PM - 10:00 PM	2.80	-	-	-	-	-	-
10:00 PM - 11:00 PM	2.78	-	-	-	-	-	-
11:00 PM - 12:00 AM	2.88	-	-	-	-	-	-
12:00 AM - 01:00 AM	2.85	-	-	-	-	-	-
01:00 AM - 02:00 AM	2.97	-	-	-	-	-	-
02:00 AM - 03:00 AM	2.63	-	-	-	-	-	-
03:00 AM - 04:00 AM	2.80	-	-	-	-	-	-
04:00 AM - 05:00 AM	2.95	-	-	-	-	-	-
05:00 AM - 06:00 AM	2.82	-	-	-	-	-	-
06:00 AM - 07:00 AM	2.91	-	-	-	-	-	-
07:00 AM - 08:00 AM	2.87	-	-	-	-	-	-
08:00 AM - 09:00 AM	2.32	-	-	-	-	-	-
09:00 AM - 10:00 AM	2.47	-	-	-	-	-	-
Average	2.69	-	-	-	-	-	-
1hr - Maximum	2.97	-	-	-	-	-	-

Reference Method : Total Hydrocarbon Analyzer (FID)

Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. The report shall not be reproduced except in full without the written approval of the laboratory.

Approved by

Saranya C.

Saranya Chalermthamrong
Scientist (4)

Analysis / Test Report

Client : Sukhumvit 59 Company Limited
10 Soi Sukhumvit 59 (Boonchana), Sukhumvit Road, Khlong Tan Nuea, Watthana, Bangkok
Thailand 10110
P/O : สัญญาจ้าง
Project Name : Monitoring EIA
Project Location :

Lot ID: 2599679
Date Received :Nov 05, 2025
Date Reported :Nov 11, 2025
Report Number :3436932-1

Sample Number 2599679-1
Parameter Wind Speed / Wind Direction
Location บริเวณพื้นที่โครงการ (GPS 47P 0671002, 1517647)
Sampling Date Nov 03 - Nov 04, 2025
Sampling by Prommee Sripatnet

Time	Nov 03 - Nov 04, 2025			-			-			-			-			-			-		
	WS (m/s)	WD (deg)		-	-		-	-		-	-		-	-		-	-		-	-	
10:00 AM - 11:00 AM	0.7	39.0	NE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11:00 AM - 12:00 PM	1.0	19.0	NNE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12:00 PM - 01:00 PM	0.5	50.0	NE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
01:00 PM - 02:00 PM	1.2	76.0	ENE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
02:00 PM - 03:00 PM	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
03:00 PM - 04:00 PM	1.6	204.0	SSW	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
04:00 PM - 05:00 PM	2.4	203.0	SSW	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
05:00 PM - 06:00 PM	2.0	217.0	SW	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
06:00 PM - 07:00 PM	1.3	56.0	NE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
07:00 PM - 08:00 PM	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
08:00 PM - 09:00 PM	0.3	219.0	SW	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
09:00 PM - 10:00 PM	0.9	28.0	NNE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10:00 PM - 11:00 PM	0.3	32.0	NNE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11:00 PM - 12:00 AM	3.2	180.0	S	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12:00 AM - 01:00 AM	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
01:00 AM - 02:00 AM	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
02:00 AM - 03:00 AM	0.5	69.0	ENE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
03:00 AM - 04:00 AM	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
04:00 AM - 05:00 AM	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
05:00 AM - 06:00 AM	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
06:00 AM - 07:00 AM	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
07:00 AM - 08:00 AM	1.0	49.0	NE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
08:00 AM - 09:00 AM	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
09:00 AM - 10:00 AM	1.0	53.0	NE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Reference Method : Cup Anemometer & Anodized Aluminium Vane Method

The above results are valid only for the analyzed/tested sample(s) as indicated in this report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that this report is not reproduced except in full.

Approved by

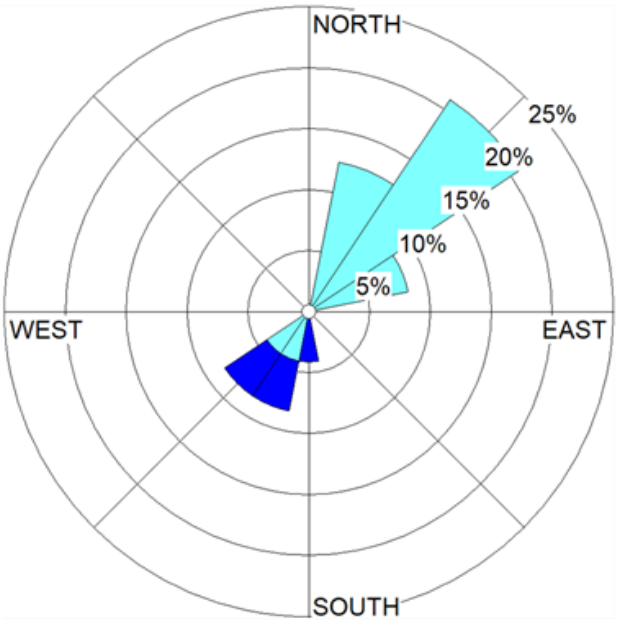
Sarayuth Jittranont
Assistant General Manager

Analysis / Test Report

Client : Sukhumvit 59 Company Limited
10 Soi Sukhumvit 59 (Boonchana), Sukhumvit Road, Khlong Tan Nuea, Watthana, Bangkok
Thailand 10110
P/O : สัญญาจ้าง
Project Name : Monitoring EIA
Project Location :

Lot ID: 2599679
Date Received :Nov 05, 2025
Date Reported :Nov 11, 2025
Report Number :3436932-1

Wind Rose



Date : Nov 03-04, 2025

WS (m/s)		%
	≥ 10.0	0.00
	8.0-10.0	0.00
	5.5-8.0	0.00
	3.3-5.5	0.00
	1.7-3.3	12.50
	0.3-1.7	50.00
	Calms	37.50

Location : บริเวณพื้นที่โครงการ (GPS 47P 0671002, 1517647)

The above results are valid only for the analyzed/tested sample(s) as indicated in this report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that this report is not reproduced except in full.

Approved by

Sarayuth Jittranont
Assistant General Manager

Analysis / Test Report

Client : Sukhumvit 59 Company Limited
10 Soi Sukhumvit 59 (Boonchana), Sukhumvit Road, Khlong Tan Nuea, Watthana, Bangkok Thailand 10110
P/O : สัญญาจ้าง
Project Name : Monitoring EIA
Project Location :

Lot ID: 2599680
Date Received : Nov 05, 2025
Date Reported : Nov 11, 2025
Report Number: 3436935-1

Sample Number	2599680-1
Parameter	Noise (Leq 24 hrs.)
Location	บริเวณพื้นที่โครงการ (GPS 47P 0671025, 1517646)
Measurement Date	Nov 03 - Nov 04, 2025
Measurement by	Prommee Sripatnet
Sound Level meter	Serial No. 597155

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
10:00 AM - 11:00 AM	62.3	89.3	58.0
11:00 AM - 12:00 PM	63.2	87.3	58.3
12:00 PM - 01:00 PM	63.1	84.5	57.7
01:00 PM - 02:00 PM	61.6	83.6	57.2
02:00 PM - 03:00 PM	60.5	80.9	57.5
03:00 PM - 04:00 PM	62.1	86.7	57.9
04:00 PM - 05:00 PM	62.0	91.3	57.8
05:00 PM - 06:00 PM	60.8	80.1	57.7
06:00 PM - 07:00 PM	60.9	79.8	57.7
07:00 PM - 08:00 PM	59.4	77.1	56.5
08:00 PM - 09:00 PM	67.2	75.7	57.0
09:00 PM - 10:00 PM	61.4	78.3	57.3
10:00 PM - 11:00 PM	59.3	80.4	55.3
11:00 PM - 12:00 AM	56.5	80.2	52.5
12:00 AM - 01:00 AM	53.4	68.3	50.8
01:00 AM - 02:00 AM	53.4	70.9	50.2
02:00 AM - 03:00 AM	52.8	79.3	49.1
03:00 AM - 04:00 AM	51.6	70.9	48.5
04:00 AM - 05:00 AM	53.1	83.4	48.7
05:00 AM - 06:00 AM	52.8	69.7	49.9
06:00 AM - 07:00 AM	54.1	75.7	50.8
07:00 AM - 08:00 AM	54.2	66.5	51.5
08:00 AM - 09:00 AM	56.5	78.5	53.3
09:00 AM - 10:00 AM	58.4	79.5	54.5
Leq Average 24 hrs. (dB(A))	60.3		
Lmax (dB(A))		91.3	
L90 (dB(A))			55.3
Ldn (dB(A))	63.2		
Standard (dB(A))	70	115	

Reference Method : ISO1996-1 and 1996-2
Standard : 1. ประกาศคณะกรรมการสิ่งแวดล้อมแห่งชาติ ฉบับที่ 15 (พ.ศ. 2540) เรื่องกำหนดมาตรฐานระดับเสียงโดยทั่วไป
2. ประกาศกระทรวงอุตสาหกรรม เรื่องกำหนดค่าระดับเสียงการรบกวน และระดับเสียงที่เกิดจากการประกอบกิจการโรงงาน พ.ศ. 2548

Technical Management
Saranya C.
Saranya Chalermthamrong
Scientist (4)

Approved by
Supot S.
Supot Salamteh
Section Head

ภาคผนวก ค-2

คุณภาพน้ำทิ้ง

Analysis / Test Report

TESTING
No.0009

Client : Sukhumvit 59 Company Limited
10 Soi Sukhumvit 59 (Boonchana), Sukhumvit Road, Khlong Tan Nuea, Watthana, Bangkok Thailand 10110
P/O : สัญญาจ้าง
Project Name : Monitoring EIA
Project Location :

Lot ID: 2564725
Date Received :Jul 14, 2025
Date Reported :Jan 23, 2026
Report Number :3364813-1 Rev. No.1

Sample Number	2564725-3
Sampled Date	Jul 14, 2025 8:30 AM
Sample Description	Wastewater
Location	บ่อปรับสมดุล
Date Analysis Commenced	Jul 14, 2025
Condition of Sample	Contained in one amber glass bottle and five plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Method	Testing Location
Microbiological Testing						
Fecal Coliform	MPN/100mL	-	-	1100000.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 9221 B, E	Bangkok
Total Coliform	MPN/100mL	-	-	4900000.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 9221 B	Bangkok
Water Testing						
BOD (5 days at 20 degree C)	mg/L	-	2.0	124	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500 - O G	Bangkok
Oil & Grease	mg/L	-	3	10	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5520 B	Bangkok
pH at 25 degree C		-	-	7.4	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500 - H (B)	Bangkok
Settleable Solid *	mL/L/hr	-	0.1	7.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 F	Bangkok
Sulfide *	mg/L	-	0.5	3.2	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-S2 (C, F)	Bangkok
Total Dissolved solids Dried at 180 degree C	mg/L	-	5	276	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	Bangkok
Total Kjeldahl Nitrogen as N *	mg/L	0.15	1.0	65.4	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-Norg (C)	Bangkok
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	370	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 D	Bangkok

Note : This Analysis test report is reissued to supersede report No. 3364813-1, Date Reported: Jul 21, 2025 due to the removal of Guideline : Notification of Ministry of Natural Resources and Environment B.E. 2567 on Effluent Control Standard from Types and Sized of Buildings, Type B.
Sampling By : Panupong Homewong

Remark :

Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. The report shall not be reproduced except in full without the written approval of the laboratory.

Approved by

Siriluk P.

Siriluk Bunnak
Section Head

Analysis / Test Report

TESTING
No.0009

Client : Sukhumvit 59 Company Limited
10 Soi Sukhumvit 59 (Boonchana), Sukhumvit Road, Khlong Tan Nuea, Watthana, Bangkok Thailand 10110
P/O : สัญญาจ้าง
Project Name : Monitoring EIA
Project Location :

Lot ID: 2564725
Date Received :Jul 14, 2025
Date Reported :Jan 23, 2026
Report Number :3364813-1 Rev. No.1

- LOD : Limit of Detection
- "<" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)
- Analyte(s) marked * is/are not included in scope of Accreditation ISO/IEC 17025.
- Sampling is not included in scope of accreditation ISO/IEC 17025

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Approved by

Siriluk Bunnak
Section Head

Analysis / Test Report

TESTING
No.0009

Client : One Sukhumvit 59 Company Limited
10 Soi Sukhumvit 59 (Boonchana), Sukhumvit Road, Khlong Tan Nuea, Watthana, Bangkok Thailand 10110
P/O : สัญญาจ้าง
Project Name : Monitoring EIA
Project Location : InterContinental Bangkok Sukhumvit

Lot ID: 2564725
Date Received : Jul 14, 2025
Date Reported : Jul 21, 2025
Report Number : 3364814-1

Sample Number	2564725-4
Sampled Date	Jul 14, 2025 8:20 AM
Sample Description	Wastewater
Location	บ่อพักน้ำใส
Date Analysis Commenced	Jul 14, 2025
Condition of Sample	Contained in one amber glass bottle and five plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Microbiological Testing							
Fecal Coliform	MPN/100mL	-	-	130000.0	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 9221 B, E	Bangkok
Total Coliform	MPN/100mL	-	-	170000.0	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 9221 B	Bangkok
Water Testing							
BOD (5 days at 20 degree C)	mg/L	-	2.0	45.8	≤30	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500 - O G	Bangkok
Oil & Grease	mg/L	-	3	4	≤20	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5520 B	Bangkok
pH at 25 degree C		-	-	7.5	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500 - H (B)	Bangkok
Settleable Solid *	mL/L/hr	-	0.1	1.0	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 F	Bangkok
Sulfide *	mg/L	-	0.5	3.6	≤1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-S2 (C, F)	Bangkok
Total Dissolved solids Dried at 180 degree C	mg/L	-	5	288	≤1000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	Bangkok

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Siriluk Bunnak
Section Head

Analysis / Test Report

TESTING
No.0009

Client : One Sukhumvit 59 Company Limited
10 Soi Sukhumvit 59 (Boonchana), Sukhumvit Road, Khlong Tan Nuea, Watthana, Bangkok Thailand 10110
P/O : สัญญาจ้าง
Project Name : Monitoring EIA
Project Location : InterContinental Bangkok Sukhumvit

Lot ID: 2564725
Date Received : Jul 14, 2025
Date Reported : Jul 21, 2025
Report Number : 3364814-1

Sample Number	2564725-4
Sampled Date	Jul 14, 2025 8:20 AM
Sample Description	Wastewater
Location	บ่อพักน้ำใส
Date Analysis Commenced	Jul 14, 2025
Condition of Sample	Contained in one amber glass bottle and five plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Total Kjeldahl Nitrogen as N *	mg/L	0.15	1.0	54.6	≤35	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-Norg (C)	Bangkok
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	96	≤40	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 D	Bangkok

Guideline : Notification of Ministry of Natural Resources and Environment B.E. 2567 on Effluent Control Standard from Types and Sized of Buildings, Type B.

Sampling By : Panupong Homewong

Remark :
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Approved by

Siriluk Bunnak
Section Head

Analysis / Test Report

TESTING
No.0009

Client : One Sukhumvit 59 Company Limited
10 Soi Sukhumvit 59 (Boonchana), Sukhumvit Road, Khlong Tan Nuea, Watthana, Bangkok Thailand 10110
P/O : สัญญาจ้าง
Project Name : Monitoring EIA
Project Location : InterContinental Bangkok Sukhumvit

Lot ID: 2564725
Date Received : Jul 14, 2025
Date Reported : Jul 21, 2025
Report Number : 3364815-1

Sample Number	2564725-5
Sampled Date	Jul 14, 2025 8:35 AM
Sample Description	Wastewater
Location	บ่อดักขยะ/บ่อตรวจคุณภาพน้ำ
Date Analysis Commenced	Jul 14, 2025
Condition of Sample	Contained in one amber glass bottle and five plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Microbiological Testing							
Fecal Coliform	MPN/100mL	-	-	33000.0	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 9221 B, E	Bangkok
Total Coliform	MPN/100mL	-	-	33000.0	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 9221 B	Bangkok
Water Testing							
BOD (5 days at 20 degree C)	mg/L	-	2.0	3.4	≤30	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500 - O G	Bangkok
Oil & Grease	mg/L	-	3	<3	≤20	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5520 B	Bangkok
pH at 25 degree C		-	-	7.4	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500 - H (B)	Bangkok
Settleable Solid *	mL/L/hr	-	0.1	<0.1	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 F	Bangkok
Sulfide *	mg/L	-	0.5	<0.5	≤1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-S2 (C, F)	Bangkok
Total Dissolved solids Dried at 180 degree C	mg/L	-	5	164	≤1000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	Bangkok

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Approved by

Siriluk Bunnak
Section Head

Analysis / Test Report

TESTING
No.0009

Client : One Sukhumvit 59 Company Limited
10 Soi Sukhumvit 59 (Boonchana), Sukhumvit Road, Khlong Tan Nuea, Watthana, Bangkok Thailand 10110
P/O : สัญญาจ้าง
Project Name : Monitoring EIA
Project Location : InterContinental Bangkok Sukhumvit

Lot ID: 2564725
Date Received : Jul 14, 2025
Date Reported : Jul 21, 2025
Report Number : 3364815-1

Sample Number	2564725-5
Sampled Date	Jul 14, 2025 8:35 AM
Sample Description	Wastewater
Location	บ่อดักขยะ/บ่อตรวจคุณภาพน้ำ
Date Analysis Commenced	Jul 14, 2025
Condition of Sample	Contained in one amber glass bottle and five plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Total Kjeldahl Nitrogen as N *	mg/L	0.15	1.0	1.8	≤35	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-Norg (C)	Bangkok
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	6	≤40	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 D	Bangkok

Guideline : Notification of Ministry of Natural Resources and Environment B.E. 2567 on Effluent Control Standard from Types and Sized of Buildings, Type B.

Sampling By : Panupong Homewong

Remark :
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Siriluk Bunnak
Section Head

Analysis / Test Report

LABORATORY ACCREDITATION
BLA-DSS

TESTING
No.0009

Client : One Sukhumvit 59 Company Limited
10 Soi Sukhumvit 59 (Boonchana), Sukhumvit Road, Khlong Tan Nuea, Watthana, Bangkok Thailand 10110
P/O : สัญญาจ้าง
Project Name : Monitoring EIA
Project Location : InterContinental Bangkok Sukhumvit

Lot ID: 2574116
Date Received : Aug 11, 2025
Date Reported : Aug 19, 2025
Report Number : 3385836-1

Sample Number	2574116-3
Sampled Date	Aug 11, 2025 8:00 AM
Sample Description	Wastewater
Location	บ่อปรับสมดุล
Date Analysis Commenced	Aug 11, 2025
Condition of Sample	Contained in one amber glass bottle and five plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Method	Testing Location
Microbiological Testing						
Fecal Coliform	MPN/100mL	-	-	17000000.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 9221 B, E	Bangkok
Total Coliform	MPN/100mL	-	-	22000000.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 9221 B	Bangkok
Water Testing						
BOD (5 days at 20 degree C)	mg/L	-	2.0	68.3	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500 - O G	Bangkok
Oil & Grease	mg/L	-	3	5	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5520 B	Bangkok
pH at 25 degree C		-	-	7.8	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500 - H (B)	Bangkok
Settleable Solid *	mL/L/hr	-	0.1	5.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 F	Bangkok
Sulfide *	mg/L	-	0.5	<0.5	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-S2 (C, F)	Bangkok
Total Dissolved solids Dried at 180 degree C	mg/L	-	5	276	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	Bangkok
Total Kjeldahl Nitrogen as N *	mg/L	0.15	1.0	62.1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-Norg (C)	Bangkok
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	142	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 D	Bangkok

Sampling By : Pichai Boonyong

Remark :
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- "<" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)

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Approved by

Suwannee Chuamkeaw
Section Head

Analysis / Test Report

TESTING
No.0009

Client : One Sukhumvit 59 Company Limited
10 Soi Sukhumvit 59 (Boonchana), Sukhumvit Road, Khlong Tan Nuea, Watthana, Bangkok Thailand 10110
P/O : สัญญาจ้าง
Project Name : Monitoring EIA
Project Location : InterContinental Bangkok Sukhumvit

Lot ID: 2574116
Date Received : Aug 11, 2025
Date Reported : Aug 19, 2025
Report Number : 3385836-1

- Analyte(s) marked * is/are not included in scope of Accreditation ISO/IEC 17025.
- Sampling is not included in scope of accreditation ISO/IEC 17025

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Suwannee Chuamkeaw
Section Head

Analysis / Test Report

TESTING
No.0009

Client : One Sukhumvit 59 Company Limited
10 Soi Sukhumvit 59 (Boonchana), Sukhumvit Road, Khlong Tan Nuea, Watthana, Bangkok Thailand 10110
P/O : สัญญาจ้าง
Project Name : Monitoring EIA
Project Location : InterContinental Bangkok Sukhumvit

Lot ID: 2574116
Date Received : Aug 11, 2025
Date Reported : Aug 19, 2025
Report Number : 3385837-1

Sample Number	2574116-4
Sampled Date	Aug 11, 2025 7:55 AM
Sample Description	Wastewater
Location	บ่อพักน้ำใส
Date Analysis Commenced	Aug 11, 2025
Condition of Sample	Contained in one amber glass bottle and five plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Microbiological Testing							
Fecal Coliform	MPN/100mL	-	-	1700000.0	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 9221 B, E	Bangkok
Total Coliform	MPN/100mL	-	-	4900000.0	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 9221 B	Bangkok
Water Testing							
BOD (5 days at 20 degree C)	mg/L	-	2.0	43.7	≤30	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500 - O G	Bangkok
Oil & Grease	mg/L	-	3	6	≤20	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5520 B	Bangkok
pH at 25 degree C		-	-	7.6	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500 - H (B)	Bangkok
Settleable Solid *	mL/L/hr	-	0.1	<0.1	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 F	Bangkok
Sulfide *	mg/L	-	0.5	2.8	≤1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-S2 (C, F)	Bangkok
Total Dissolved solids Dried at 180 degree C	mg/L	-	5	256	≤1000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	Bangkok

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Suwannee Chuamkeaw
Section Head

Analysis / Test Report

TESTING
No.0009

Client : One Sukhumvit 59 Company Limited
10 Soi Sukhumvit 59 (Boonchana), Sukhumvit Road, Khlong Tan Nuea, Watthana, Bangkok Thailand 10110
P/O : สัญญาจ้าง
Project Name : Monitoring EIA
Project Location : InterContinental Bangkok Sukhumvit

Lot ID: 2574116
Date Received : Aug 11, 2025
Date Reported : Aug 19, 2025
Report Number : 3385837-1

Sample Number	2574116-4
Sampled Date	Aug 11, 2025 7:55 AM
Sample Description	Wastewater
Location	บ่อพักน้ำใส
Date Analysis Commenced	Aug 11, 2025
Condition of Sample	Contained in one amber glass bottle and five plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Total Kjeldahl Nitrogen as N *	mg/L	0.15	1.0	59.2	≤35	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-Norg (C)	Bangkok
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	116	≤40	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 D	Bangkok

Guideline : Notification of Ministry of Natural Resources and Environment B.E. 2567 on Effluent Control Standard from Types and Sized of Buildings, Type B.

Sampling By : Pichai Boonyong

Remark :
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Suwannee Chuamkeaw
Section Head

Analysis / Test Report

TESTING
No.0009

Client : One Sukhumvit 59 Company Limited
10 Soi Sukhumvit 59 (Boonchana), Sukhumvit Road, Khlong Tan Nuea, Watthana, Bangkok Thailand 10110
P/O : สัญญาจ้าง
Project Name : Monitoring EIA
Project Location: InterContinental Bangkok Sukhumvit

Lot ID: 2574116
Date Received : Aug 11, 2025
Date Reported : Aug 19, 2025
Report Number : 3385838-1

Sample Number	2574116-5
Sampled Date	Aug 11, 2025 8:20 AM
Sample Description	Wastewater
Location	บ่อดักขยะ/บ่อตรวจคุณภาพน้ำ
Date Analysis Commenced	Aug 11, 2025
Condition of Sample	Contained in one amber glass bottle and five plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Microbiological Testing							
Fecal Coliform	MPN/100mL	-	-	13000.0	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 9221 B, E	Bangkok
Total Coliform	MPN/100mL	-	-	170000.0	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 9221 B	Bangkok
Water Testing							
BOD (5 days at 20 degree C)	mg/L	-	2.0	6.3	≤30	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500 - O G	Bangkok
Oil & Grease	mg/L	-	3	<3	≤20	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5520 B	Bangkok
pH at 25 degree C		-	-	7.6	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500 - H (B)	Bangkok
Settleable Solid *	mL/L/hr	-	0.1	<0.1	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 F	Bangkok
Sulfide *	mg/L	-	0.5	0.8	≤1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-S2 (C, F)	Bangkok
Total Dissolved solids Dried at 180 degree C	mg/L	-	5	260	≤1000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	Bangkok

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Suwannee Chuamkeaw
Section Head

Analysis / Test Report

TESTING
No.0009

Client : One Sukhumvit 59 Company Limited
10 Soi Sukhumvit 59 (Boonchana), Sukhumvit Road, Khlong Tan Nuea, Watthana, Bangkok Thailand 10110
P/O : สัญญาจ้าง
Project Name : Monitoring EIA
Project Location: InterContinental Bangkok Sukhumvit

Lot ID: 2574116
Date Received : Aug 11, 2025
Date Reported : Aug 19, 2025
Report Number : 3385838-1

Sample Number	2574116-5
Sampled Date	Aug 11, 2025 8:20 AM
Sample Description	Wastewater
Location	บ่อดักขยะ/บ่อตรวจคุณภาพน้ำ
Date Analysis Commenced	Aug 11, 2025
Condition of Sample	Contained in one amber glass bottle and five plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Total Kjeldahl Nitrogen as N *	mg/L	0.15	1.0	4.2	≤35	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-Norg (C)	Bangkok
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	7	≤40	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 D	Bangkok

Guideline : Notification of Ministry of Natural Resources and Environment B.E. 2567 on Effluent Control Standard from Types and Sized of Buildings, Type B.

Sampling By : Pichai Boonyong

Remark :
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Suwannee Chuamkeaw
Section Head

Analysis / Test Report

TESTING
No.0009

Client : Sukhumvit 59 Company Limited
10 Soi Sukhumvit 59 (Boonchana), Sukhumvit Road, Khlong Tan Nuea, Watthana, Bangkok Thailand 10110
P/O : สัญญาจ้าง
Project Name : Monitoring EIA
Project Location :

Lot ID: 2585824
Date Received :Sep 15, 2025
Date Reported :Sep 22, 2025
Report Number :3412261-1

Sample Number	2585824-3
Sampled Date	Sep 15, 2025 8:25 AM
Sample Description	Wastewater
Location	บ่อปรับสมดุล
Date Analysis Commenced	Sep 15, 2025
Condition of Sample	Contained in one amber glass bottle and five plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Method	Testing Location
Microbiological Testing						
Fecal Coliform	MPN/100mL	-	-	1300000.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 9221 B, E	Bangkok
Total Coliform	MPN/100mL	-	-	2400000.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 9221 B	Bangkok
Water Testing						
BOD (5 days at 20 degree C)	mg/L	-	2.0	111	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500 - O G	Bangkok
Oil & Grease	mg/L	-	3	<3	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5520 B	Bangkok
pH at 25 degree C		-	-	7.4	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500 - H (B)	Bangkok
Settleable Solid *	mL/L/hr	-	0.1	0.2	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 F	Bangkok
Sulfide *	mg/L	-	0.5	<0.5	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-S2 (C, F)	Bangkok
Total Dissolved solids Dried at 180 degree C	mg/L	-	5	232	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	Bangkok
Total Kjeldahl Nitrogen as N *	mg/L	0.15	1.0	44.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-Norg (C)	Bangkok
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	124	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 D	Bangkok

Sampling By : Panupong Homewong

Remark :
- LOD : Limit of Detection
- "<" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)

Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. The report shall not be reproduced except in full without the written approval of the laboratory.

Approved by

Nanthawadee Somboon
Specialist 2

Analysis / Test Report

TESTING
No.0009

Client : Sukhumvit 59 Company Limited
10 Soi Sukhumvit 59 (Boonchana), Sukhumvit Road, Khlong Tan Nuea, Watthana, Bangkok Thailand 10110
P/O : สัญญาจ้าง
Project Name : Monitoring EIA
Project Location :

Lot ID: 2585824
Date Received : Sep 15, 2025
Date Reported : Sep 22, 2025
Report Number : 3412261-1

- Analyte(s) marked * is/are not included in scope of Accreditation ISO/IEC 17025.
- Sampling is not included in scope of accreditation ISO/IEC 17025

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Nanthawadee Somboon
Specialist 2

Analysis / Test Report

TESTING
No.0009

Client : Sukhumvit 59 Company Limited
10 Soi Sukhumvit 59 (Boonchana), Sukhumvit Road, Khlong Tan Nuea, Watthana, Bangkok Thailand 10110
P/O : สัญญาจ้าง
Project Name : Monitoring EIA
Project Location:

Lot ID: 2585824
Date Received : Sep 15, 2025
Date Reported : Sep 22, 2025
Report Number : 3412262-1

Sample Number	2585824-4
Sampled Date	Sep 15, 2025 8:30 AM
Sample Description	Wastewater
Location	บ่อพักน้ำใส
Date Analysis Commenced	Sep 15, 2025
Condition of Sample	Contained in one amber glass bottle and five plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Microbiological Testing							
Fecal Coliform	MPN/100mL	-	-	790000.0	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 9221 B, E	Bangkok
Total Coliform	MPN/100mL	-	-	1100000.0	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 9221 B	Bangkok
Water Testing							
BOD (5 days at 20 degree C)	mg/L	-	2.0	90.2	≤30	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500 - O G	Bangkok
Oil & Grease	mg/L	-	3	<3	≤20	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5520 B	Bangkok
pH at 25 degree C		-	-	7.4	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500 - H (B)	Bangkok
Settleable Solid *	mL/L/hr	-	0.1	1.0	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 F	Bangkok
Sulfide *	mg/L	-	0.5	2.8	≤1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-S2 (C, F)	Bangkok
Total Dissolved solids Dried at 180 degree C	mg/L	-	5	188	≤1000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	Bangkok

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Specialist 2

Analysis / Test Report

TESTING
No.0009

Client : Sukhumvit 59 Company Limited
10 Soi Sukhumvit 59 (Boonchana), Sukhumvit Road, Khlong Tan Nuea, Watthana, Bangkok Thailand 10110
P/O : สัญญาจ้าง
Project Name : Monitoring EIA
Project Location:

Lot ID: 2585824
Date Received : Sep 15, 2025
Date Reported : Sep 22, 2025
Report Number : 3412262-1

Sample Number	2585824-4
Sampled Date	Sep 15, 2025 8:30 AM
Sample Description	Wastewater
Location	บ่อพักน้ำใส
Date Analysis Commenced	Sep 15, 2025
Condition of Sample	Contained in one amber glass bottle and five plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Total Kjeldahl Nitrogen as N *	mg/L	0.15	1.0	54.7	≤35	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-Norg (C)	Bangkok
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	104	≤40	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 D	Bangkok

Guideline : Notification of Ministry of Natural Resources and Environment B.E. 2567 on Effluent Control Standard from Types and Sized of Buildings, Type B.

Sampling By : Panupong Homewong

Remark :
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- "<" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)
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Approved by

Nanthawadee Somboon
Specialist 2

Analysis / Test Report

TESTING
No.0009

Client : Sukhumvit 59 Company Limited
10 Soi Sukhumvit 59 (Boonchana), Sukhumvit Road, Khlong Tan Nuea, Watthana, Bangkok Thailand 10110
P/O : สัญญาจ้าง
Project Name : Monitoring EIA
Project Location:

Lot ID: 2585824
Date Received : Sep 15, 2025
Date Reported : Sep 22, 2025
Report Number : 3412263-1

Sample Number	2585824-5
Sampled Date	Sep 15, 2025 8:20 AM
Sample Description	Wastewater
Location	บ่อดักขยะ/บ่อตรวจคุณภาพน้ำ
Date Analysis Commenced	Sep 15, 2025
Condition of Sample	Contained in one amber glass bottle and five plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Microbiological Testing							
Fecal Coliform	MPN/100mL	-	-	7900.0	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 9221 B, E	Bangkok
Total Coliform	MPN/100mL	-	-	330000.0	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 9221 B	Bangkok
Water Testing							
BOD (5 days at 20 degree C)	mg/L	-	2.0	3.0	≤30	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500 - O G	Bangkok
Oil & Grease	mg/L	-	3	<3	≤20	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5520 B	Bangkok
pH at 25 degree C		-	-	7.4	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500 - H (B)	Bangkok
Settleable Solid *	mL/L/hr	-	0.1	<0.1	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 F	Bangkok
Sulfide *	mg/L	-	0.5	<0.5	≤1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-S2 (C, F)	Bangkok
Total Dissolved solids Dried at 180 degree C	mg/L	-	5	168	≤1000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	Bangkok

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Specialist 2

Analysis / Test Report

TESTING
No.0009

Client : Sukhumvit 59 Company Limited
10 Soi Sukhumvit 59 (Boonchana), Sukhumvit Road, Khlong Tan Nuea, Watthana, Bangkok Thailand 10110
P/O : สัญญาจ้าง
Project Name : Monitoring EIA
Project Location :

Lot ID: 2585824
Date Received : Sep 15, 2025
Date Reported : Sep 22, 2025
Report Number : 3412263-1

Sample Number	2585824-5
Sampled Date	Sep 15, 2025 8:20 AM
Sample Description	Wastewater
Location	บ่อดักขยะ/บ่อตรวจคุณภาพน้ำ
Date Analysis Commenced	Sep 15, 2025
Condition of Sample	Contained in one amber glass bottle and five plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Total Kjeldahl Nitrogen as N *	mg/L	0.15	1.0	4.4	≤35	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-Norg (C)	Bangkok
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	11	≤40	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 D	Bangkok

Guideline : Notification of Ministry of Natural Resources and Environment B.E. 2567 on Effluent Control Standard from Types and Sized of Buildings, Type B.

Sampling By : Panupong Homewong

Remark :
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Approved by

Nanthawadee Somboon
Specialist 2

Analysis / Test Report

TESTING
No.0009

Client : Sukhumvit 59 Company Limited
10 Soi Sukhumvit 59 (Boonchana), Sukhumvit Road, Khlong Tan Nuea, Watthana, Bangkok Thailand 10110
P/O : สัญญาจ้าง
Project Name : Monitoring EIA
Project Location :

Lot ID: 2593652
Date Received :Oct 14, 2025
Date Reported :Oct 21, 2025
Report Number :3431759-1

Sample Number	2593652-3
Sampled Date	Oct 14, 2025 11:25 AM
Sample Description	Wastewater
Location	บ่อปรับสมดุล
Date Analysis Commenced	Oct 15, 2025
Condition of Sample	Contained in one amber glass bottle and five plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Method	Testing Location
Microbiological Testing						
Fecal Coliform	MPN/100mL	-	-	790000.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 9221 B, E	Bangkok
Total Coliform	MPN/100mL	-	-	1300000.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 9221 B	Bangkok
Water Testing						
BOD (5 days at 20 degree C)	mg/L	-	2.0	56.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500 - O G	Bangkok
Oil & Grease	mg/L	-	3	4	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5520 B	Bangkok
pH at 25 degree C		-	-	7.4	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500 - H (B)	Bangkok
Settleable Solid *	mL/L/hr	-	0.1	<0.1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 F	Bangkok
Sulfide *	mg/L	-	0.5	1.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-S2 (C, F)	Bangkok
Total Dissolved solids Dried at 180 degree C	mg/L	-	5	252	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	Bangkok
Total Kjeldahl Nitrogen as N *	mg/L	0.15	1.0	55.1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-Norg (C)	Bangkok
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	87	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 D	Bangkok

Sampling By : Panupong Homewong

Remark :
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- "<" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)

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Approved by

Suwimon Chairuangwut
Scientist (3)

Analysis / Test Report

TESTING
No.0009

Client : Sukhumvit 59 Company Limited
10 Soi Sukhumvit 59 (Boonchana), Sukhumvit Road, Khlong Tan Nuea, Watthana, Bangkok Thailand 10110
P/O : สัญญาจ้าง
Project Name : Monitoring EIA
Project Location :

Lot ID: 2593652
Date Received : Oct 14, 2025
Date Reported : Oct 21, 2025
Report Number : 3431759-1

- Analyte(s) marked * is/are not included in scope of Accreditation ISO/IEC 17025.
- Sampling is not included in scope of accreditation ISO/IEC 17025

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Approved by

Suwimon Chairuangwut
Scientist (3)

Analysis / Test Report

TESTING
No.0009

Client : Sukhumvit 59 Company Limited
10 Soi Sukhumvit 59 (Boonchana), Sukhumvit Road, Khlong Tan Nuea, Watthana, Bangkok Thailand 10110
P/O : สัญญาจ้าง
Project Name : Monitoring EIA
Project Location :

Lot ID: 2593652
Date Received : Oct 14, 2025
Date Reported : Oct 21, 2025
Report Number : 3431760-1

Sample Number	2593652-4
Sampled Date	Oct 14, 2025 11:20 AM
Sample Description	Wastewater
Location	บ่อพักน้ำใส
Date Analysis Commenced	Oct 15, 2025
Condition of Sample	Contained in one amber glass bottle and five plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Microbiological Testing							
Fecal Coliform	MPN/100mL	-	-	3300000.0	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 9221 B, E	Bangkok
Total Coliform	MPN/100mL	-	-	4900000.0	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 9221 B	Bangkok
Water Testing							
BOD (5 days at 20 degree C)	mg/L	-	2.0	75.2	≤30	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500 - O G	Bangkok
Oil & Grease	mg/L	-	3	4	≤20	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5520 B	Bangkok
pH at 25 degree C		-	-	7.4	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500 - H (B)	Bangkok
Settleable Solid *	mL/L/hr	-	0.1	<0.1	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 F	Bangkok
Sulfide *	mg/L	-	0.5	<0.5	≤1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-S2 (C, F)	Bangkok
Total Dissolved solids Dried at 180 degree C	mg/L	-	5	264	≤1000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	Bangkok

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Suwimon Chairuangwut
Scientist (3)

Analysis / Test Report

TESTING
No.0009

Client : Sukhumvit 59 Company Limited
10 Soi Sukhumvit 59 (Boonchana), Sukhumvit Road, Khlong Tan Nuea, Watthana, Bangkok Thailand 10110
P/O : สัญญาจ้าง
Project Name : Monitoring EIA
Project Location :

Lot ID: 2593652
Date Received : Oct 14, 2025
Date Reported : Oct 21, 2025
Report Number : 3431760-1

Sample Number	2593652-4
Sampled Date	Oct 14, 2025 11:20 AM
Sample Description	Wastewater
Location	บ่อพักน้ำใส
Date Analysis Commenced	Oct 15, 2025
Condition of Sample	Contained in one amber glass bottle and five plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Total Kjeldahl Nitrogen as N *	mg/L	0.15	1.0	59.1	≤35	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-Norg (C)	Bangkok
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	102	≤40	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 D	Bangkok

Guideline : Notification of Ministry of Natural Resources and Environment B.E. 2567 on Effluent Control Standard from Types and Sized of Buildings, Type B.

Sampling By : Panupong Homewong

Remark :
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Scientist (3)

Analysis / Test Report

TESTING
No.0009

Client : Sukhumvit 59 Company Limited
10 Soi Sukhumvit 59 (Boonchana), Sukhumvit Road, Khlong Tan Nuea, Watthana, Bangkok Thailand 10110
P/O : สัญญาจ้าง
Project Name : Monitoring EIA
Project Location :

Lot ID: 2593652
Date Received : Oct 14, 2025
Date Reported : Oct 21, 2025
Report Number : 3431761-1

Sample Number	2593652-5
Sampled Date	Oct 14, 2025 11:30 AM
Sample Description	Wastewater
Location	บ่อดักขยะ/บ่อตรวจคุณภาพน้ำ
Date Analysis Commenced	Oct 15, 2025
Condition of Sample	Contained in one amber glass bottle and five plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Microbiological Testing							
Fecal Coliform	MPN/100mL	-	-	13000.0	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 9221 B, E	Bangkok
Total Coliform	MPN/100mL	-	-	240000.0	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 9221 B	Bangkok
Water Testing							
BOD (5 days at 20 degree C)	mg/L	-	2.0	6.8	≤30	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500 - O G	Bangkok
Oil & Grease	mg/L	-	3	<3	≤20	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5520 B	Bangkok
pH at 25 degree C		-	-	7.3	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500 - H (B)	Bangkok
Settleable Solid *	mL/L/hr	-	0.1	<0.1	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 F	Bangkok
Sulfide *	mg/L	-	0.5	<0.5	≤1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-S2 (C, F)	Bangkok
Total Dissolved solids Dried at 180 degree C	mg/L	-	5	304	≤1000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	Bangkok

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Suwimon Chairuangwut
Scientist (3)

Analysis / Test Report

TESTING
No.0009

Client : Sukhumvit 59 Company Limited
10 Soi Sukhumvit 59 (Boonchana), Sukhumvit Road, Khlong Tan Nuea, Watthana, Bangkok Thailand 10110
P/O : สัญญาจ้าง
Project Name : Monitoring EIA
Project Location :

Lot ID: 2593652
Date Received : Oct 14, 2025
Date Reported : Oct 21, 2025
Report Number : 3431761-1

Sample Number	2593652-5
Sampled Date	Oct 14, 2025 11:30 AM
Sample Description	Wastewater
Location	บ่อดักขยะ/บ่อตรวจคุณภาพน้ำ
Date Analysis Commenced	Oct 15, 2025
Condition of Sample	Contained in one amber glass bottle and five plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Total Kjeldahl Nitrogen as N *	mg/L	0.15	1.0	4.0	≤35	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-Norg (C)	Bangkok
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	10	≤40	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 D	Bangkok

Guideline : Notification of Ministry of Natural Resources and Environment B.E. 2567 on Effluent Control Standard from Types and Sized of Buildings, Type B.

Sampling By : Panupong Homewong

Remark :
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Scientist (3)

Analysis / Test Report

TESTING
No.0009

Client : Sukhumvit 59 Company Limited
10 Soi Sukhumvit 59 (Boonchana), Sukhumvit Road, Khlong Tan Nuea, Watthana, Bangkok Thailand 10110
P/O : สัญญาจ้าง
Project Name : Monitoring EIA
Project Location :

Lot ID: 2599642
Date Received : Nov 10, 2025
Date Reported : Nov 27, 2025
Report Number : 3455404-1

Sample Number	2599642-3
Sampled Date	Nov 10, 2025 10:50 AM
Sample Description	Wastewater
Location	บ่อปรับสมดุล
Date Analysis Commenced	Nov 11, 2025
Condition of Sample	Contained in one amber glass bottle and five plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Method	Testing Location
Microbiological Testing						
Fecal Coliform	MPN/100mL	-	-	2400000.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 9221 B, E	Bangkok
Total Coliform	MPN/100mL	-	-	2400000.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 9221 B	Bangkok
Water Testing						
BOD (5 days at 20 degree C)	mg/L	-	2.0	87.8	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500 - O G	Bangkok
Oil & Grease	mg/L	-	3	7	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5520 B	Bangkok
pH at 25 degree C		-	-	7.5	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500 - H (B)	Bangkok
Settleable Solid *	mL/L/hr	-	0.1	0.2	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 F	Bangkok
Sulfide *	mg/L	-	0.5	<0.5	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-S2 (C, F)	Bangkok
Total Dissolved solids Dried at 180 degree C	mg/L	-	5	268	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	Bangkok
Total Kjeldahl Nitrogen as N *	mg/L	0.15	1.0	54.4	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-Norg (C)	Bangkok
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	127	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 D	Bangkok

Sampling By : Nonthakorn Phurkphong

Remark :
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- "<" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)

Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. The report shall not be reproduced except in full without the written approval of the laboratory.

Approved by

Sithichok Thongnguen
Scientist (3)

Analysis / Test Report

TESTING
No.0009

Client : Sukhumvit 59 Company Limited
10 Soi Sukhumvit 59 (Boonchana), Sukhumvit Road, Khlong Tan Nuea, Watthana, Bangkok Thailand 10110
P/O : สัญญาจ้าง
Project Name : Monitoring EIA
Project Location :

Lot ID: 2599642
Date Received : Nov 10, 2025
Date Reported : Nov 27, 2025
Report Number : 3455404-1

- Analyte(s) marked * is/are not included in scope of Accreditation ISO/IEC 17025.
- Sampling is not included in scope of accreditation ISO/IEC 17025

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Approved by

Sithichok Thongnguen
Scientist (3)

Analysis / Test Report

TESTING
No.0009

Client : Sukhumvit 59 Company Limited
10 Soi Sukhumvit 59 (Boonchana), Sukhumvit Road, Khlong Tan Nuea, Watthana, Bangkok Thailand 10110
P/O : สัญญาจ้าง
Project Name : Monitoring EIA
Project Location :

Lot ID: 2599642
Date Received : Nov 10, 2025
Date Reported : Nov 27, 2025
Report Number : 3455405-1

Sample Number	2599642-4
Sampled Date	Nov 10, 2025 11:00 AM
Sample Description	Wastewater
Location	บ่อพักน้ำใส
Date Analysis Commenced	Nov 11, 2025
Condition of Sample	Contained in one amber glass bottle and five plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Microbiological Testing							
Fecal Coliform	MPN/100mL	-	-	220000.0	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 9221 B, E	Bangkok
Total Coliform	MPN/100mL	-	-	490000.0	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 9221 B	Bangkok
Water Testing							
BOD (5 days at 20 degree C)	mg/L	-	2.0	73.4	≤30	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500 - O G	Bangkok
Oil & Grease	mg/L	-	3	5	≤20	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5520 B	Bangkok
pH at 25 degree C		-	-	7.4	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500 - H (B)	Bangkok
Settleable Solid *	mL/L/hr	-	0.1	0.1	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 F	Bangkok
Sulfide *	mg/L	-	0.5	2.2	≤1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-S2 (C, F)	Bangkok
Total Dissolved solids Dried at 180 degree C	mg/L	-	5	260	≤1000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	Bangkok

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Approved by

SithichokT.

Sithichok Thongnguen
Scientist (3)

Analysis / Test Report

TESTING
No.0009

Client : Sukhumvit 59 Company Limited
10 Soi Sukhumvit 59 (Boonchana), Sukhumvit Road, Khlong Tan Nuea, Watthana, Bangkok Thailand 10110
P/O : สัญญาจ้าง
Project Name : Monitoring EIA
Project Location :

Lot ID: 2599642
Date Received : Nov 10, 2025
Date Reported : Nov 27, 2025
Report Number : 3455405-1

Sample Number	2599642-4
Sampled Date	Nov 10, 2025 11:00 AM
Sample Description	Wastewater
Location	บ่อพักน้ำใส
Date Analysis Commenced	Nov 11, 2025
Condition of Sample	Contained in one amber glass bottle and five plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Total Kjeldahl Nitrogen as N *	mg/L	0.15	1.0	49.5	≤35	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-Norg (C)	Bangkok
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	97	≤40	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 D	Bangkok

Guideline : Notification of Ministry of Natural Resources and Environment B.E. 2567 on Effluent Control Standard from Types and Sized of Buildings, Type B.

Sampling By : Nonthakorn Phurkphong

Remark :
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- "<" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)
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- Sampling is not included in scope of accreditation ISO/IEC 17025

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Approved by

SithichokT.
Sithichok Thongnguen
Scientist (3)

Analysis / Test Report

TESTING
No.0009

Client : Sukhumvit 59 Company Limited
10 Soi Sukhumvit 59 (Boonchana), Sukhumvit Road, Khlong Tan Nuea, Watthana, Bangkok Thailand 10110
P/O : สัญญาจ้าง
Project Name : Monitoring EIA
Project Location :

Lot ID: 2599642
Date Received : Nov 10, 2025
Date Reported : Nov 27, 2025
Report Number : 3455406-1

Sample Number	2599642-5
Sampled Date	Nov 10, 2025 10:55 AM
Sample Description	Wastewater
Location	บ่อดักขยะ/บ่อตรวจคุณภาพน้ำ
Date Analysis Commenced	Nov 11, 2025
Condition of Sample	Contained in one amber glass bottle and five plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Microbiological Testing							
Fecal Coliform	MPN/100mL	-	-	330000.0	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 9221 B, E	Bangkok
Total Coliform	MPN/100mL	-	-	490000.0	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 9221 B	Bangkok
Water Testing							
BOD (5 days at 20 degree C)	mg/L	-	2.0	3.1	≤30	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500 - O G	Bangkok
Oil & Grease	mg/L	-	3	<3	≤20	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5520 B	Bangkok
pH at 25 degree C		-	-	7.3	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500 - H (B)	Bangkok
Settleable Solid *	mL/L/hr	-	0.1	<0.1	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 F	Bangkok
Sulfide *	mg/L	-	0.5	<0.5	≤1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-S2 (C, F)	Bangkok
Total Dissolved solids Dried at 180 degree C	mg/L	-	5	320	≤1000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	Bangkok

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Approved by

SithichokT.

Sithichok Thongnguen
Scientist (3)

Analysis / Test Report

TESTING
No.0009

Client : Sukhumvit 59 Company Limited
10 Soi Sukhumvit 59 (Boonchana), Sukhumvit Road, Khlong Tan Nuea, Watthana, Bangkok Thailand 10110
P/O : สัญญาจ้าง
Project Name : Monitoring EIA
Project Location :

Lot ID: 2599642
Date Received : Nov 10, 2025
Date Reported : Nov 27, 2025
Report Number : 3455406-1

Sample Number	2599642-5
Sampled Date	Nov 10, 2025 10:55 AM
Sample Description	Wastewater
Location	บ่อดักขยะ/บ่อตรวจคุณภาพน้ำ
Date Analysis Commenced	Nov 11, 2025
Condition of Sample	Contained in one amber glass bottle and five plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Total Kjeldahl Nitrogen as N *	mg/L	0.15	1.0	3.2	≤35	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-Norg (C)	Bangkok
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	8	≤40	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 D	Bangkok

Guideline : Notification of Ministry of Natural Resources and Environment B.E. 2567 on Effluent Control Standard from Types and Sized of Buildings, Type B.

Sampling By : Nonthakorn Phurkphong

Remark :
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Approved by

Sithichok Thongnguen
Scientist (3)

Analysis / Test Report

TESTING
No.0009

Client : Sukhumvit 59 Company Limited
10 Soi Sukhumvit 59 (Boonchana), Sukhumvit Road, Khlong Tan Nuea, Watthana, Bangkok Thailand 10110
P/O : สัญญาจ้าง
Project Name : Monitoring EIA
Project Location :

Lot ID: 25109878
Date Received : Dec 08, 2025
Date Reported : Dec 16, 2025
Report Number : 3472696-1

Sample Number	25109878-3
Sampled Date	Dec 08, 2025 9:10 AM
Sample Description	Wastewater
Location	บ่อปรับสมดุล
Date Analysis Commenced	Dec 09, 2025
Condition of Sample	Contained in one amber glass bottle and five plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Method	Testing Location
Microbiological Testing						
Fecal Coliform	MPN/100mL	-	-	1700000.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 9221 B, E	Bangkok
Total Coliform	MPN/100mL	-	-	1700000.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 9221 B	Bangkok
Water Testing						
BOD (5 days at 20 degree C)	mg/L	-	2.0	62.2	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500 - O G	Bangkok
Oil & Grease	mg/L	-	3	5	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5520 B	Bangkok
pH at 25 degree C		-	-	7.4	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500 - H (B)	Bangkok
Settleable Solid *	mL/L/hr	-	0.1	0.4	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 F	Bangkok
Sulfide *	mg/L	-	0.5	<0.5	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-S2 (C, F)	Bangkok
Total Dissolved solids Dried at 180 degree C	mg/L	-	5	208	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	Bangkok
Total Kjeldahl Nitrogen as N *	mg/L	0.15	1.0	51.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-Norg (C)	Bangkok
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	76	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 D	Bangkok

Sampling By : Anuwat Phutawin

Remark :
- LOD : Limit of Detection
- "<" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)

Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. The report shall not be reproduced except in full without the written approval of the laboratory.

Approved by

Suwannee Chuamkeaw
Section Head

Analysis / Test Report

TESTING
No.0009

Client : Sukhumvit 59 Company Limited
10 Soi Sukhumvit 59 (Boonchana), Sukhumvit Road, Khlong Tan Nuea, Watthana, Bangkok Thailand 10110
P/O : สัญญาจ้าง
Project Name : Monitoring EIA
Project Location :

Lot ID: 25109878
Date Received : Dec 08, 2025
Date Reported : Dec 16, 2025
Report Number : 3472696-1

- Analyte(s) marked * is/are not included in scope of Accreditation ISO/IEC 17025.
- Sampling is not included in scope of accreditation ISO/IEC 17025

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Approved by

Suwannee Chuamkeaw
Section Head

Analysis / Test Report

TESTING
No.0009

Client : Sukhumvit 59 Company Limited
10 Soi Sukhumvit 59 (Boonchana), Sukhumvit Road, Khlong Tan Nuea, Watthana, Bangkok Thailand 10110
P/O : สัญญาจ้าง
Project Name : Monitoring EIA
Project Location :

Lot ID: 25109878
Date Received : Dec 08, 2025
Date Reported : Dec 16, 2025
Report Number : 3472697-1

Sample Number	25109878-4
Sampled Date	Dec 08, 2025 9:07 AM
Sample Description	Wastewater
Location	บ่อพักน้ำใส
Date Analysis Commenced	Dec 09, 2025
Condition of Sample	Contained in one amber glass bottle and five plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Microbiological Testing							
Fecal Coliform	MPN/100mL	-	-	4900.0	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 9221 B, E	Bangkok
Total Coliform	MPN/100mL	-	-	24000.0	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 9221 B	Bangkok
Water Testing							
BOD (5 days at 20 degree C)	mg/L	-	2.0	58.4	≤30	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500 - O G	Bangkok
Oil & Grease	mg/L	-	3	4	≤20	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5520 B	Bangkok
pH at 25 degree C		-	-	7.4	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500 - H (B)	Bangkok
Settleable Solid *	mL/L/hr	-	0.1	<0.1	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 F	Bangkok
Sulfide *	mg/L	-	0.5	1.0	≤1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-S2 (C, F)	Bangkok
Total Dissolved solids Dried at 180 degree C	mg/L	-	5	220	≤1000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	Bangkok

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Suwannee Chuamkeaw
Section Head

Analysis / Test Report

TESTING
No.0009

Client : Sukhumvit 59 Company Limited
10 Soi Sukhumvit 59 (Boonchana), Sukhumvit Road, Khlong Tan Nuea, Watthana, Bangkok Thailand 10110
P/O : สัญญาจ้าง
Project Name : Monitoring EIA
Project Location :

Lot ID: 25109878
Date Received : Dec 08, 2025
Date Reported : Dec 16, 2025
Report Number : 3472697-1

Sample Number	25109878-4
Sampled Date	Dec 08, 2025 9:07 AM
Sample Description	Wastewater
Location	บ่อพักน้ำใส
Date Analysis Commenced	Dec 09, 2025
Condition of Sample	Contained in one amber glass bottle and five plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Total Kjeldahl Nitrogen as N *	mg/L	0.15	1.0	49.8	≤35	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-Norg (C)	Bangkok
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	27	≤40	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 D	Bangkok

Guideline : Notification of Ministry of Natural Resources and Environment B.E. 2567 on Effluent Control Standard from Types and Sized of Buildings, Type B.

Sampling By : Anuwat Phutawin

Remark :
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- Sampling is not included in scope of accreditation ISO/IEC 17025

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Approved by

Suwannee Chuamkeaw
Section Head

Analysis / Test Report

TESTING
No.0009

Client : Sukhumvit 59 Company Limited
10 Soi Sukhumvit 59 (Boonchana), Sukhumvit Road, Khlong Tan Nuea, Watthana, Bangkok Thailand 10110
P/O : สัญญาจ้าง
Project Name : Monitoring EIA
Project Location :

Lot ID: 25109878
Date Received : Dec 08, 2025
Date Reported : Dec 16, 2025
Report Number : 3472698-1

Sample Number	25109878-5
Sampled Date	Dec 08, 2025 9:14 AM
Sample Description	Wastewater
Location	บ่อดักขยะ/บ่อตรวจคุณภาพน้ำ
Date Analysis Commenced	Dec 09, 2025
Condition of Sample	Contained in one amber glass bottle and five plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Microbiological Testing							
Fecal Coliform	MPN/100mL	-	-	1300000.0	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 9221 B, E	Bangkok
Total Coliform	MPN/100mL	-	-	160000000.0	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 9221 B	Bangkok
Water Testing							
BOD (5 days at 20 degree C)	mg/L	-	2.0	47.2	≤30	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500 - O G	Bangkok
Oil & Grease	mg/L	-	3	4	≤20	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5520 B	Bangkok
pH at 25 degree C		-	-	7.5	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500 - H (B)	Bangkok
Settleable Solid *	mL/L/hr	-	0.1	<0.1	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 F	Bangkok
Sulfide *	mg/L	-	0.5	<0.5	≤1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-S2 (C, F)	Bangkok
Total Dissolved solids Dried at 180 degree C	mg/L	-	5	196	≤1000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	Bangkok

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Approved by

Suwannee Chuamkeaw
Section Head

Analysis / Test Report

TESTING
No.0009

Client : Sukhumvit 59 Company Limited
10 Soi Sukhumvit 59 (Boonchana), Sukhumvit Road, Khlong Tan Nuea, Watthana, Bangkok Thailand 10110
P/O : สัญญาจ้าง
Project Name : Monitoring EIA
Project Location :

Lot ID: 25109878
Date Received : Dec 08, 2025
Date Reported : Dec 16, 2025
Report Number : 3472698-1

Sample Number	25109878-5
Sampled Date	Dec 08, 2025 9:14 AM
Sample Description	Wastewater
Location	บ่อดักขยะ/บ่อตรวจคุณภาพน้ำ
Date Analysis Commenced	Dec 09, 2025
Condition of Sample	Contained in one amber glass bottle and five plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Total Kjeldahl Nitrogen as N *	mg/L	0.15	1.0	13.8	≤35	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-Norg (C)	Bangkok
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	18	≤40	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 D	Bangkok

Guideline : Notification of Ministry of Natural Resources and Environment B.E. 2567 on Effluent Control Standard from Types and Sized of Buildings, Type B.

Sampling By : Anuwat Phutawin

Remark :
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- "<" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)
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- Sampling is not included in scope of accreditation ISO/IEC 17025

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Approved by

Suwannee Chuamkeaw
Section Head

ภาคผนวก ค-3

คุณภาพน้ำสระว่ายน้ำ (รายเดือน)

Analysis / Test Report

TESTING
No.0009

Client : One Sukhumvit 59 Company Limited
10 Soi Sukhumvit 59 (Boonchana), Sukhumvit Road, Khlong Tan Nuea, Watthana, Bangkok Thailand 10110
P/O : สัญญาจ้าง
Project Name : Monitoring EIA
Project Location : InterContinental Bangkok Sukhumvit

Lot ID: 2564725
Date Received : Jul 14, 2025
Date Reported : Jul 21, 2025
Report Number : 3364811-1

Sample Number	2564725-1
Sampled Date	Jul 14, 2025 8:52 AM
Sample Description	Swimming Pool
Location	ส่วนลึก
Date Analysis Commenced	Jul 14, 2025
Condition of Sample	Contained in one plastic bottle, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Microbiological Testing							
Fecal Coliform	MPN/100mL	-	-	<1.1	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 9221 E	Bangkok
Total Coliform	MPN/100mL	-	-	<1.1	<10	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 9221 B	Bangkok

Guideline : BMA : Regulation of Bangkok about Swimming Pool, B.E.2530

Sampling By : Panupong Homewong

Remark :
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Approved by

Suwannee Chuamkeaw
Section Head

Analysis / Test Report

TESTING
No.0009

Client : One Sukhumvit 59 Company Limited
10 Soi Sukhumvit 59 (Boonchana), Sukhumvit Road, Khlong Tan Nuea, Watthana, Bangkok Thailand 10110
P/O : สัญญาจ้าง
Project Name : Monitoring EIA
Project Location : InterContinental Bangkok Sukhumvit

Lot ID: 2564725
Date Received : Jul 14, 2025
Date Reported : Jul 21, 2025
Report Number : 3364812-1

Sample Number	2564725-2
Sampled Date	Jul 14, 2025 8:50 AM
Sample Description	Swimming Pool
Location	ส่วนตื้น
Date Analysis Commenced	Jul 14, 2025
Condition of Sample	Contained in one plastic bottle, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Microbiological Testing							
Fecal Coliform	MPN/100mL	-	-	<1.1	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 9221 E	Bangkok
Total Coliform	MPN/100mL	-	-	<1.1	<10	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 9221 B	Bangkok

Guideline : BMA : Regulation of Bangkok about Swimming Pool, B.E.2530

Sampling By : Panupong Homewong

Remark :
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Approved by

Suwannee Chuamkeaw
Section Head

Analysis / Test Report

TESTING
No.0009

Client : One Sukhumvit 59 Company Limited
10 Soi Sukhumvit 59 (Boonchana), Sukhumvit Road, Khlong Tan Nuea, Watthana, Bangkok Thailand 10110
P/O : สัญญาจ้าง
Project Name : Monitoring EIA
Project Location : InterContinental Bangkok Sukhumvit

Lot ID: 2574116
Date Received : Aug 11, 2025
Date Reported : Aug 19, 2025
Report Number : 3385834-1

Sample Number	2574116-1
Sampled Date	Aug 11, 2025 8:12 AM
Sample Description	Swimming Pool
Location	ส่วนลึก
Date Analysis Commenced	Aug 11, 2025
Condition of Sample	Contained in one plastic bottle, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Microbiological Testing							
Fecal Coliform	MPN/100mL	-	-	<1.1	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 9221 E	Bangkok
Total Coliform	MPN/100mL	-	-	<1.1	<10	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 9221 B	Bangkok

Guideline : BMA : Regulation of Bangkok about Swimming Pool, B.E.2530

Sampling By : Pichai Boonyong

Remark :
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Approved by

Suwannee Chuamkeaw
Section Head

Analysis / Test Report

TESTING
No.0009

Client : One Sukhumvit 59 Company Limited
10 Soi Sukhumvit 59 (Boonchana), Sukhumvit Road, Khlong Tan Nuea, Watthana, Bangkok Thailand 10110
P/O : สัญญาจ้าง
Project Name : Monitoring EIA
Project Location : InterContinental Bangkok Sukhumvit

Lot ID: 2574116
Date Received : Aug 11, 2025
Date Reported : Aug 19, 2025
Report Number : 3385835-1

Sample Number	2574116-2
Sampled Date	Aug 11, 2025 8:10 AM
Sample Description	Swimming Pool
Location	ส่วนดื้น
Date Analysis Commenced	Aug 11, 2025
Condition of Sample	Contained in one plastic bottle, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Microbiological Testing							
Fecal Coliform	MPN/100mL	-	-	<1.1	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 9221 E	Bangkok
Total Coliform	MPN/100mL	-	-	<1.1	<10	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 9221 B	Bangkok

Guideline : BMA : Regulation of Bangkok about Swimming Pool, B.E.2530

Sampling By : Pichai Boonyong

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Suwannee Chuamkeaw
Section Head

Analysis / Test Report

TESTING
No.0009

Client : Sukhumvit 59 Company Limited
10 Soi Sukhumvit 59 (Boonchana), Sukhumvit Road, Khlong Tan Nuea, Watthana, Bangkok Thailand 10110
P/O : สัญญาจ้าง
Project Name : Monitoring EIA
Project Location :

Lot ID: 2585824
Date Received : Sep 15, 2025
Date Reported : Sep 22, 2025
Report Number : 3412259-1

Sample Number	2585824-1
Sampled Date	Sep 15, 2025 8:35 AM
Sample Description	Swimming Pool
Location	ส่วนลึก
Date Analysis Commenced	Sep 15, 2025
Condition of Sample	Contained in one plastic bottle, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Microbiological Testing							
Fecal Coliform	MPN/100mL	-	-	<1.1	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 9221 E	Bangkok
Total Coliform	MPN/100mL	-	-	<1.1	<10	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 9221 B	Bangkok

Guideline : BMA : Regulation of Bangkok about Swimming Pool, B.E.2530

Sampling By : Panupong Homewong

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Suwannee Chuamkeaw
Section Head

Analysis / Test Report

TESTING
No.0009

Client : Sukhumvit 59 Company Limited
10 Soi Sukhumvit 59 (Boonchana), Sukhumvit Road, Khlong Tan Nuea, Watthana, Bangkok Thailand 10110
P/O : สัญญาจ้าง
Project Name : Monitoring EIA
Project Location :

Lot ID: 2585824
Date Received : Sep 15, 2025
Date Reported : Sep 22, 2025
Report Number : 3412260-1

Sample Number	2585824-2
Sampled Date	Sep 15, 2025 8:40 AM
Sample Description	Swimming Pool
Location	ส่วนตื้น
Date Analysis Commenced	Sep 15, 2025
Condition of Sample	Contained in one plastic bottle, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Microbiological Testing							
Fecal Coliform	MPN/100mL	-	-	<1.1	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 9221 E	Bangkok
Total Coliform	MPN/100mL	-	-	<1.1	<10	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 9221 B	Bangkok

Guideline : BMA : Regulation of Bangkok about Swimming Pool, B.E.2530

Sampling By : Panupong Homewong

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Suwannee Chuamkeaw
Section Head

Analysis / Test Report

TESTING
No.0009

Client : Sukhumvit 59 Company Limited
10 Soi Sukhumvit 59 (Boonchana), Sukhumvit Road, Khlong Tan Nuea, Watthana, Bangkok Thailand 10110
P/O : สัญญาจ้าง
Project Name : Monitoring EIA
Project Location :

Lot ID: 2593652
Date Received : Oct 14, 2025
Date Reported : Oct 21, 2025
Report Number : 3431757-1

Sample Number	2593652-1
Sampled Date	Oct 14, 2025 11:35 AM
Sample Description	Swimming Pool
Location	ส่วนลึก
Date Analysis Commenced	Oct 15, 2025
Condition of Sample	Contained in one plastic bottle, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Microbiological Testing							
Fecal Coliform *	MPN/100mL	-	-	<1.1	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 9221 E	Bangkok
Total Coliform	MPN/100mL	-	-	<1.1	<10	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 9221 B	Bangkok

Guideline : BMA : Regulation of Bangkok about Swimming Pool, B.E.2530

Sampling By : Panupong Homewong

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Suwannee Chuamkeaw
Section Head

Analysis / Test Report

TESTING
No.0009

Client : Sukhumvit 59 Company Limited
10 Soi Sukhumvit 59 (Boonchana), Sukhumvit Road, Khlong Tan Nuea, Watthana, Bangkok Thailand 10110
P/O : สัญญาจ้าง
Project Name : Monitoring EIA
Project Location :

Lot ID: 2593652
Date Received : Oct 14, 2025
Date Reported : Oct 21, 2025
Report Number : 3431758-1

Sample Number	2593652-2
Sampled Date	Oct 14, 2025 11:40 AM
Sample Description	Swimming Pool
Location	ส่วนดื้น
Date Analysis Commenced	Oct 15, 2025
Condition of Sample	Contained in one plastic bottle, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Microbiological Testing							
Fecal Coliform *	MPN/100mL	-	-	<1.1	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 9221 E	Bangkok
Total Coliform	MPN/100mL	-	-	<1.1	<10	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 9221 B	Bangkok

Guideline : BMA : Regulation of Bangkok about Swimming Pool, B.E.2530

Sampling By : Panupong Homewong

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Suwannee Chuamkeaw
Section Head

Analysis / Test Report

TESTING
No.0009

Client : Sukhumvit 59 Company Limited
10 Soi Sukhumvit 59 (Boonchana), Sukhumvit Road, Khlong Tan Nuea, Watthana, Bangkok Thailand 10110
P/O : สัญญาจ้าง
Project Name : Monitoring EIA
Project Location :

Lot ID: 2599642
Date Received : Nov 10, 2025
Date Reported : Nov 27, 2025
Report Number : 3455402-1

Sample Number	2599642-1
Sampled Date	Nov 10, 2025 11:10 AM
Sample Description	Swimming Pool
Location	ส่วนลึก
Date Analysis Commenced	Nov 11, 2025
Condition of Sample	Contained in four plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Microbiological Testing							
Escherichia coli	in 100 mL	-	-	Not Detected	Not Detected	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 9221 B, F	Bangkok
Fecal Coliform	MPN/100mL	-	-	<1.1	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 9221 B, E	Bangkok
Total Coliform	MPN/100mL	-	-	<1.1	<10	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 9221 B	Bangkok
Water Testing							
Ammonium *	mg/L	-	0.06	<0.06	No Standard	Based on Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-NH3 F	Bangkok
Calcium Hardness as CaCO3 *	mg/L	-	1	114	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3500-Ca (B)	Bangkok
Chloride as Cl *	mg/L	0.06	0.2	2072	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4110 B	Bangkok
Combined residual chlorine *	mg/L	-	0.1	0.10	No Standard	Calculation	Bangkok
Cyanuric acid *	mg/L	2	7	Not Detected	No Standard	Colorimetric Method	Bangkok
Nitrate as N *	mg/L	0.06	0.2	4.1	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4110 B	Bangkok
Residual Chlorine *	mg/L	-	0.1	0.9	No Standard	Based on Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-Cl (G)	Bangkok

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Approved by

Sithichok Thongnguen
Scientist (3)

Analysis / Test Report

TESTING
No.0009

Client : Sukhumvit 59 Company Limited
10 Soi Sukhumvit 59 (Boonchana), Sukhumvit Road, Khlong Tan Nuea, Watthana, Bangkok Thailand 10110
P/O : สัญญาจ้าง
Project Name : Monitoring EIA
Project Location :

Lot ID: 2599642
Date Received : Nov 10, 2025
Date Reported : Nov 27, 2025
Report Number : 3455402-1

Sample Number	2599642-1
Sampled Date	Nov 10, 2025 11:10 AM
Sample Description	Swimming Pool
Location	ส่วนลึก
Date Analysis Commenced	Nov 11, 2025
Condition of Sample	Contained in four plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Residual Free Chlorine *	mg/L	-	0.1	0.8	0.6-1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-Cl (F)	Bangkok
Total Alkalinity as CaCO3 *	mg/L	-	1	20	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2320 B	Bangkok

Guideline : BMA : Regulation of Bangkok about Swimming Pool, B.E.2530

Sampling By : Nonthakorn Phurkphong

Remark :
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Approved by

Sithichok Thongnguen
Scientist (3)

Analysis / Test Report

TESTING
No.0009

Client : Sukhumvit 59 Company Limited
10 Soi Sukhumvit 59 (Boonchana), Sukhumvit Road, Khlong Tan Nuea, Watthana, Bangkok Thailand 10110
P/O : สัญญาจ้าง
Project Name : Monitoring EIA
Project Location :

Lot ID: 2599642
Date Received : Nov 10, 2025
Date Reported : Nov 27, 2025
Report Number : 3455403-1

Sample Number	2599642-2
Sampled Date	Nov 10, 2025 11:05 AM
Sample Description	Swimming Pool
Location	ส่วนดื้น
Date Analysis Commenced	Nov 11, 2025
Condition of Sample	Contained in four plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Microbiological Testing							
Escherichia coli	in 100 mL	-	-	Not Detected	Not Detected	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 9221 B, F	Bangkok
Fecal Coliform	MPN/100mL	-	-	<1.1	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 9221 B, E	Bangkok
Total Coliform	MPN/100mL	-	-	<1.1	<10	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 9221 B	Bangkok
Water Testing							
Ammonium *	mg/L	-	0.06	<0.06	No Standard	Based on Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-NH3 F	Bangkok
Calcium Hardness as CaCO3 *	mg/L	-	1	118	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3500-Ca (B)	Bangkok
Chloride as Cl *	mg/L	0.06	0.2	2050	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4110 B	Bangkok
Combined residual chlorine *	mg/L	-	0.1	<0.10	No Standard	Calculation	Bangkok
Cyanuric acid *	mg/L	2	7	Not Detected	No Standard	Colorimetric Method	Bangkok
Nitrate as N *	mg/L	0.06	0.2	4.1	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4110 B	Bangkok
Residual Chlorine *	mg/L	-	0.1	1.0	No Standard	Based on Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-Cl (G)	Bangkok

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Approved by

SithichokT.

Sithichok Thongnguen
Scientist (3)

Analysis / Test Report

TESTING
No.0009

Client : Sukhumvit 59 Company Limited
10 Soi Sukhumvit 59 (Boonchana), Sukhumvit Road, Khlong Tan Nuea, Watthana, Bangkok Thailand 10110
P/O : สัญญาจ้าง
Project Name : Monitoring EIA
Project Location :

Lot ID: 2599642
Date Received : Nov 10, 2025
Date Reported : Nov 27, 2025
Report Number : 3455403-1

Sample Number	2599642-2
Sampled Date	Nov 10, 2025 11:05 AM
Sample Description	Swimming Pool
Location	ส่วนตื้น
Date Analysis Commenced	Nov 11, 2025
Condition of Sample	Contained in four plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Residual Free Chlorine	mg/L	-	0.1	0.9	0.6-1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-Cl (F)	Bangkok
Total Alkalinity as CaCO3 *	mg/L	-	1	20	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2320 B	Bangkok

Guideline : BMA : Regulation of Bangkok about Swimming Pool, B.E.2530

Sampling By : Nonthakorn Phurkphong

Remark :
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Approved by

Sithichok Thongnguen
Scientist (3)

Analysis / Test Report

TESTING
No.0009

Client : Sukhumvit 59 Company Limited
10 Soi Sukhumvit 59 (Boonchana), Sukhumvit Road, Khlong Tan Nuea, Watthana, Bangkok Thailand 10110
P/O : สัญญาจ้าง
Project Name : Monitoring EIA
Project Location :

Lot ID: 25109878
Date Received : Dec 08, 2025
Date Reported : Dec 16, 2025
Report Number : 3472694-1

Sample Number	25109878-1
Sampled Date	Dec 08, 2025 9:05 AM
Sample Description	Swimming Pool
Location	ส่วนลึก
Date Analysis Commenced	Dec 09, 2025
Condition of Sample	Contained in one plastic bottle, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Microbiological Testing							
Fecal Coliform	MPN/100mL	-	-	<1.1	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 9221 E	Bangkok
Total Coliform	MPN/100mL	-	-	<1.1	<10	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 9221 B	Bangkok

Guideline : BMA : Regulation of Bangkok about Swimming Pool, B.E.2530

Sampling By : Anuwat Phutawin

Remark :
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Approved by

Suwannee Chuamkeaw
Section Head

Analysis / Test Report

TESTING
No.0009

Client : Sukhumvit 59 Company Limited
10 Soi Sukhumvit 59 (Boonchana), Sukhumvit Road, Khlong Tan Nuea, Watthana, Bangkok Thailand 10110
P/O : สัญญาจ้าง
Project Name : Monitoring EIA
Project Location :

Lot ID: 25109878
Date Received : Dec 08, 2025
Date Reported : Dec 16, 2025
Report Number : 3472695-1

Sample Number	25109878-2
Sampled Date	Dec 08, 2025 9:00 AM
Sample Description	Swimming Pool
Location	ส่วนดื้น
Date Analysis Commenced	Dec 09, 2025
Condition of Sample	Contained in one plastic bottle, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Microbiological Testing							
Fecal Coliform	MPN/100mL	-	-	<1.1	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 9221 E	Bangkok
Total Coliform	MPN/100mL	-	-	<1.1	<10	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 9221 B	Bangkok

Guideline : BMA : Regulation of Bangkok about Swimming Pool, B.E.2530

Sampling By : Anuwat Phutawin

Remark :
- LOD : Limit of Detection
- "<" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)
- Analyte(s) marked * is/are not included in scope of Accreditation ISO/IEC 17025.
- Sampling is not included in scope of accreditation ISO/IEC 17025

Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. The report shall not be reproduced except in full without the written approval of the laboratory.

Approved by

Suwannee Chuamkeaw
Section Head

ภาคผนวก ค-4

คุณภาพน้ำสระว่ายน้ำ (รายปี)

Analysis / Test Report

TESTING
No.0009

Client : One Sukhumvit 59 Company Limited
10 Soi Sukhumvit 59 (Boonchana), Sukhumvit Road, Khlong Tan Nuea, Watthana, Bangkok Thailand 10110
P/O : สัญญาจ้าง
Project Name : Monitoring EIA
Project Location: InterContinental Bangkok Sukhumvit

Lot ID: 2539531
Date Received : May 13, 2025
Date Reported : May 23, 2025
Report Number : 3314748-1

Sample Number	2539531-1
Sampled Date	May 13, 2025 11:38 AM
Sample Description	Swimming Pool
Location	ส่วนลึก
Date Analysis Commenced	May 14, 2025
Condition of Sample	Contained in four plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Microbiological Testing							
Escherichia coli	in 100 mL	-	-	Not Detected	Not Detected	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 9221 B, F	Bangkok
Fecal Coliform	MPN/100mL	-	-	<1.1	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 9221 B, E	Bangkok
Total Coliform	MPN/100mL	-	-	<1.1	<10	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 9221 B	Bangkok
Water Testing							
Ammonium *	mg/L	-	0.06	<0.06	No Standard	Based on Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-NH3 F	Bangkok
Calcium Hardness as CaCO3 *	mg/L	-	1	124	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3500-Ca (B)	Bangkok
Chloride as Cl *	mg/L	0.06	0.2	1219	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4110 B	Bangkok
Combined residual chlorine *	mg/L	-	0.1	<0.10	No Standard	Calculation	Bangkok
Cyanuric acid *	mg/L	2	7	<7	No Standard	Colorimetric Method	Bangkok
Nitrate as N *	mg/L	0.06	0.2	4.5	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4110 B	Bangkok
Residual Chlorine *	mg/L	-	0.1	1.9	No Standard	Based on Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-Cl (G)	Bangkok

Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. The report shall not be reproduced except in full without the written approval of the laboratory.

Approved by
Suwimon Chairuangwut
Scientist (3)

Analysis / Test Report

TESTING
No.0009

Client : One Sukhumvit 59 Company Limited
10 Soi Sukhumvit 59 (Boonchana), Sukhumvit Road, Khlong Tan Nuea, Watthana, Bangkok Thailand 10110
P/O : สัญญาจ้าง
Project Name : Monitoring EIA
Project Location: InterContinental Bangkok Sukhumvit

Lot ID: 2539531
Date Received : May 13, 2025
Date Reported : May 23, 2025
Report Number : 3314748-1

Sample Number	2539531-1
Sampled Date	May 13, 2025 11:38 AM
Sample Description	Swimming Pool
Location	ส่วนลึก
Date Analysis Commenced	May 14, 2025
Condition of Sample	Contained in four plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Residual Free Chlorine *	mg/L	-	0.1	1.8	0.6-1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-Cl (F)	Bangkok
Total Alkalinity as CaCO3 *	mg/L	-	1	38	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2320 B	Bangkok

Guideline : BMA : Regulation of Bangkok about Swimming Pool, B.E.2530
Sampling By : Thitiwan Aimurai

Remark :
- LOD : Limit of Detection
- "<" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)
- Analyte(s) marked * is/are not included in scope of Accreditation ISO/IEC 17025.
- Sampling is not included in scope of accreditation ISO/IEC 17025

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Approved by
Suwimon Chairuangwut
Scientist (3)

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Analysis / Test Report

TESTING
No.0009

Client : One Sukhumvit 59 Company Limited
10 Soi Sukhumvit 59 (Boonchana), Sukhumvit Road, Khlong Tan Nuea, Watthana, Bangkok Thailand 10110
P/O : สัญญาจ้าง
Project Name : Monitoring EIA
Project Location: InterContinental Bangkok Sukhumvit

Lot ID: 2539531
Date Received : May 13, 2025
Date Reported : May 23, 2025
Report Number : 3314749-1

Sample Number	2539531-2
Sampled Date	May 13, 2025 11:42 AM
Sample Description	Swimming Pool
Location	ส่วนดื่น
Date Analysis Commenced	May 14, 2025
Condition of Sample	Contained in four plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Microbiological Testing							
Escherichia coli	in 100 mL	-	-	Not Detected	Not Detected	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 9221 B, F	Bangkok
Fecal Coliform	MPN/100mL	-	-	<1.1	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 9221 B, E	Bangkok
Total Coliform	MPN/100mL	-	-	<1.1	<10	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 9221 B	Bangkok
Water Testing							
Ammonium *	mg/L	-	0.06	<0.06	No Standard	Based on Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-NH3 F	Bangkok
Calcium Hardness as CaCO3 *	mg/L	-	1	129	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3500-Ca (B)	Bangkok
Chloride as Cl *	mg/L	0.06	0.2	1222	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4110 B	Bangkok
Combined residual chlorine *	mg/L	-	0.1	0.37	No Standard	Calculation	Bangkok
Cyanuric acid *	mg/L	2	7	<7	No Standard	Colorimetric Method	Bangkok
Nitrate as N *	mg/L	0.06	0.2	4.3	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4110 B	Bangkok
Residual Chlorine *	mg/L	-	0.1	2.1	No Standard	Based on Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-Cl (G)	Bangkok

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Approved by
Suwimon Chairuangwut
Scientist (3)

Analysis / Test Report

TESTING
No.0009

Client : One Sukhumvit 59 Company Limited
10 Soi Sukhumvit 59 (Boonchana), Sukhumvit Road, Khlong Tan Nuea, Watthana, Bangkok Thailand 10110
P/O : สัญญาจ้าง
Project Name : Monitoring EIA
Project Location: InterContinental Bangkok Sukhumvit

Lot ID: 2539531
Date Received : May 13, 2025
Date Reported : May 23, 2025
Report Number : 3314749-1

Sample Number	2539531-2
Sampled Date	May 13, 2025 11:42 AM
Sample Description	Swimming Pool
Location	ส่วนดื่น
Date Analysis Commenced	May 14, 2025
Condition of Sample	Contained in four plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Residual Free Chlorine *	mg/L	-	0.1	1.8	0.6-1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-Cl (F)	Bangkok
Total Alkalinity as CaCO3 *	mg/L	-	1	40	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2320 B	Bangkok

Guideline : BMA : Regulation of Bangkok about Swimming Pool, B.E.2530
Sampling By : Thitiwan Aimurai

Remark :
- LOD : Limit of Detection
- "<" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)
- Analyte(s) marked * is/are not included in scope of Accreditation ISO/IEC 17025.
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Approved by
Suwimon Chairuangwut
Scientist (3)

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ภาคผนวก ง

เอกสารการสอบเทียบเครื่องมือตรวจวิเคราะห์

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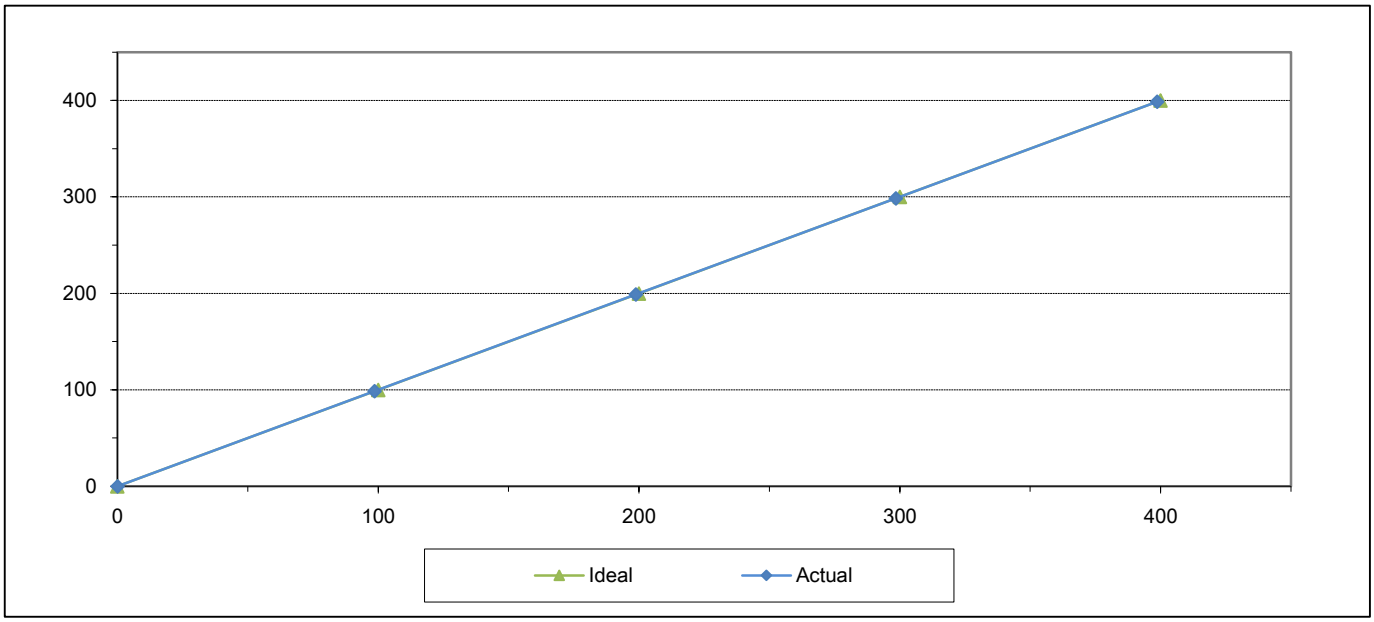
รายการเครื่องมือที่ใช้ในการวิเคราะห์ / ทดสอบ

Sample Name	Parameter	Equipment Name	ID No.	Calibrated Date	Next Cal	Freq. Calibrate (Months)
Ambient	Carbon Monoxide	CO Analyzer	BKK_FS0786	1-Jul-25	1-Jan-26	6
Ambient	Nitrogen Dioxide	NO_2 Analyzer	BKK_FS0779	2-Jul-25	2-Jan-26	6
Ambient	Particulate Matter (PM-10)	High Volume	BKK_FS0389	-	-	On site Calibration
Ambient	Particulate Matter (PM-10)	Digital Balance	BKK_EN0403	30-May-25	30-May-26	12
Ambient	Total Suspended Particulate	High Volume	BKK_FS1376	-	-	On site Calibration
Ambient	Total Suspended Particulate	Digital Balance	BKK_EN0403	30-May-25	30-May-26	12
Ambient	Total Hydrocarbon	THC Analyzer	BKK_FS0805	1-Jul-25	1-Jan-26	6
Water Lab	Total Coliform	Autoclave	BKK_ML0041	4-Mar-25	4-Sep-26	18
Water Lab	Total Coliform	Incubator	BKK_ML0231	21-Aug-25	21-Aug-26	12
Water Lab	Total Coliform	Hot Air Oven	BKK_ML0013	9-Oct-25	9-Apr-27	18
Water Lab	Fecal Coliform	Autoclave	BKK_ML0041	4-Mar-25	4-Sep-26	18
Water Lab	Fecal Coliform	Incubator	BKK_ML0231	21-Aug-25	21-Aug-26	12
Water Lab	Fecal Coliform	Hot Air Oven	BKK_ML0013	9-Oct-25	9-Apr-27	18
Water Lab	Fecal Coliform	Water Bath	BKK_ML0056	4-Mar-25	4-Mar-26	12
Water Lab	pH at 25 ^{o}C	pH meter	BKK_EN0342	9-Oct-25	9-Oct-26	12
Water Lab	Settleable Solids	Chamber (Cooling Room)	BKK_EN0167	4-Jun-25	4-Dec-26	18
Water Lab	Sulfide	Burette	BKK_EN0422	3-Sep-25	3-Sep-26	12
Water Lab	Sulfide	Chamber (Cooling Room)	BKK_EN0167	4-Jun-25	4-Dec-26	18
Water Lab	Oil & Grease	Electronic Top-Loading Balance	BKK_EN0003	17-Jul-25	17-Jul-26	12
Water Lab	Oil & Grease	Water Bath	BKK_EN0439	9-Oct-25	9-Oct-26	12
Water Lab	Total Kjeldahl Nitrogen	Digestion Unit	BKK_EN0366	9-Apr-25	9-Apr-26	12
Water Lab	Total Kjeldahl Nitrogen	Discrete analyzer	BKK_EN0438	15-Jul-25	15-Jul-26	12
Water Lab	Total Suspended Solids	Electronic Top-Loading Balance	BKK_EN0003	17-Jul-25	17-Jul-26	12
Water Lab	Total Suspended Solids	Oven	BKK_EN0425	6-Oct-25	6-Oct-26	12
Water Lab	Total Dissolved Solids 180°C	Electronic Top-Loading Balance	BKK_EN0003	17-Jul-25	17-Jul-26	12
Water Lab	Total Dissolved Solids 180°C	Oven	BKK_EN0425	6-Oct-25	6-Oct-26	12
Water Lab	BOD	DO Meter	BKK_EN0017	20-May-25	20-Nov-26	18
Water Lab	BOD	Incubator	BKK_EN0305	5-Mar-25	5-Mar-26	12
Water Lab	BOD	Burette	BKK_EN0422	3-Sep-25	3-Sep-26	12
Water Lab	Ammonium	Discrete analyzer	BKK_EN0438	15-Jul-25	15-Jul-26	12
Water Lab	Total Alkalinity	Burette	BKK_EN0422	3-Sep-25	3-Sep-26	12
Water Lab	Calcium Hardness	Burette	BKK_EN0422	3-Sep-25	3-Sep-26	12
Water Lab	Nitrate	Ion Chromatography	BKK_EN0069	24-Jun-25	24-Jun-26	12
Water Lab	Chloride	Ion Chromatography	BKK_EN0069	24-Jun-25	24-Jun-26	12
Water Lab	*Escherichia coli*	Autoclave	BKK_ML0041	4-Mar-25	4-Sep-26	18
Water Lab	*Escherichia coli*	Incubator	BKK_ML0231	21-Aug-25	21-Aug-26	12
Water Lab	*Escherichia coli*	Hot Air Oven	BKK_ML0013	9-Oct-25	9-Apr-27	18
Water Lab	*Escherichia coli*	Water Bath	BKK_ML0056	4-Mar-25	4-Mar-26	12
Water Lab	Residual Chlorine	Chlorine Meter	BKK_LG0069	1-Apr-25	1-Apr-26	12
Water Lab	Residual Free Chlorine	Chlorine Meter	BKK_LG0069	1-Apr-25	1-Apr-26	12
Water Lab	Cyanuric acid	Spectrophotometer	SGK_CL0100	25-Dec-24	25-Dec-25	12

MULTIPOINT CALIBRATION REPORT

Calibration Date	1-Jul-25	Equipment Name	CO Analyzer
Manufacturer	HORIBA	Model	APMA-370
Serial No.	YD1WSD2G	Equipment ID	BKK_FS0786
Calibrator Manufacturer	Teledyne API	Model	700
Serial No.	947		
Std. Gas Concentration (PPM)	55.22	Cylinder No.	GN0027222
Cylinder Pressure (psi)	1800	Certified By	Airgas Inc.
Certified Date	9-Feb-22	Expired Date	9-Feb-30

Point	CALIBRATION RESULTS			
	Ideal	Actual	Error	%Error
ZERO	0.00	0.10	0.10	0.10
1	100.00	98.60	-1.40	-1.40
2	200.00	198.80	-1.20	-0.60
3	300.00	298.50	-1.50	-0.50
4	400.00	398.70	-1.30	-0.33
AVERAGE (%)				-0.55



Calibrated By

(Mr.Jirawut Sakarn)
Field Environmental Scientist (3)

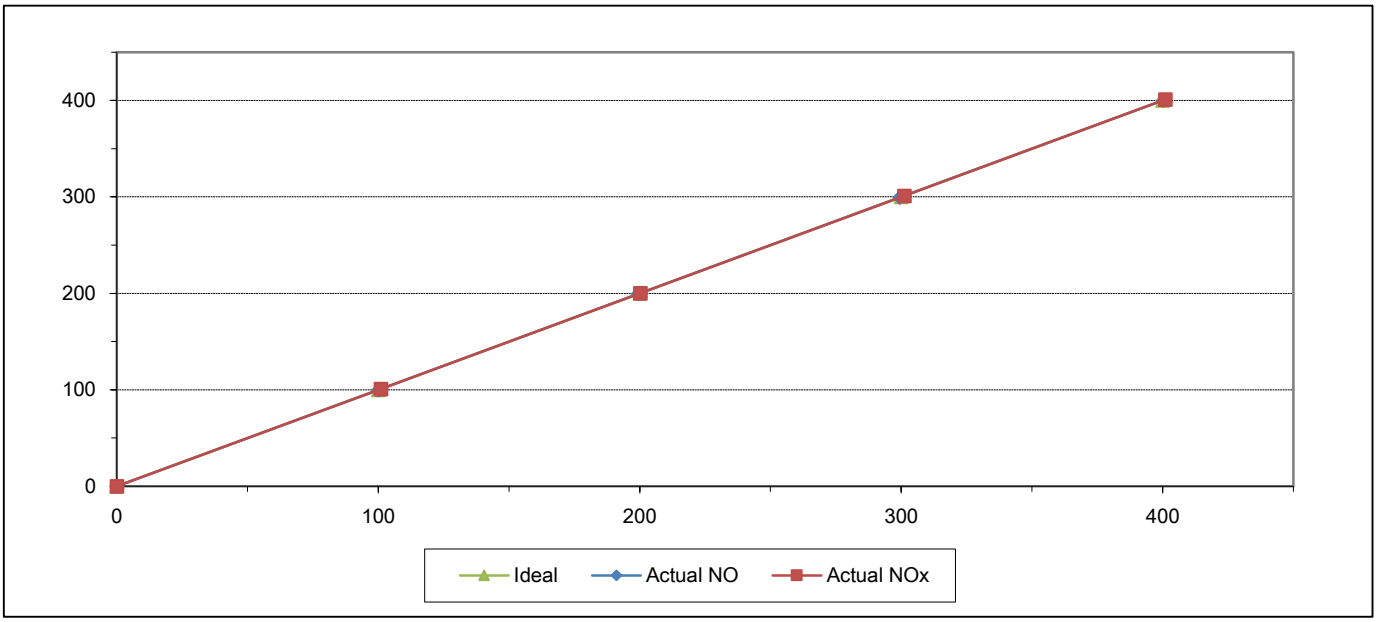
Approved By

(Mr.Sarayuth Jittranont)
Assistant General Manager

MULTIPOINT CALIBRATION REPORT

Calibration Date	2-Jul-25	Equipment Name	NOx Analyzer
Manufacturer	HORIBA	Model	APNA-370
Serial No.	VJVBGEEP	Equipment ID	BKK_FS0779
Calibrator Manufacturer	Teledyne API	Model	700
Serial No.	947		
Std. Gas Concentration (PPM)	55.88	Cylinder No.	GN0027222
Cylinder Pressure (psi)	1800	Certified By	Airgas Inc.
Certified Date	9-Feb-22	Expired Date	9-Feb-30

Point	CALIBRATION RESULTS						
	Ideal	Actual NO	Error NO	%Error NO	Actual NOx	Error NOx	%Error NOx
ZERO	0.00	0.10	0.10	0.10	0.10	0.10	0.10
1	100.00	100.10	0.10	0.10	101.00	1.00	1.00
2	200.00	199.50	-0.50	-0.25	200.30	0.30	0.15
3	300.00	299.50	-0.50	-0.17	301.20	1.20	0.40
4	400.00	400.20	0.20	0.05	401.10	1.10	0.28
AVERAGE (%)				-0.03			0.39



Calibrated By

(Mr.Jirawut Sakarn)
Field Environmental Scientist (3)

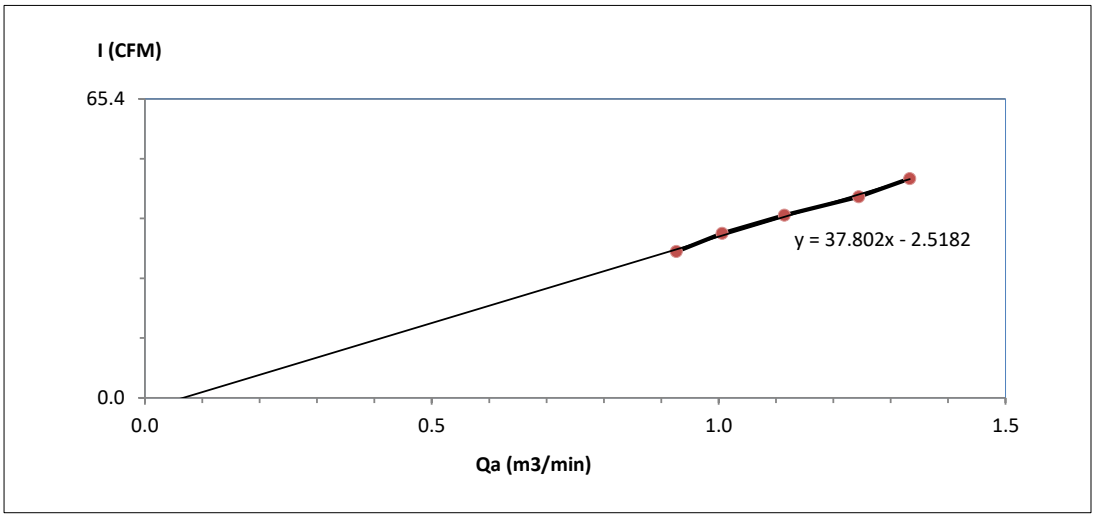
Approved By

(Mr.Sarayuth Jittranont)
Assistant General Manager

High Volume Air Sampler Calibration Worksheet

Project Site :	Sukhumvit 59 Company Limited	**Barometric Pressure (mm Hg) :**	758.1
Calibrate Location :	บริเวณพื้นที่โครงการ	**Temperature (°C) :**	31.2
Calibrate Date :	3-Nov-25	**High Volume ID :**	BKK_FS0389
CalibrationSheet No.:	**C-031125-BKK_FS0389**	**High Volume Model :**	TE-5009X
Calibrator ID:	BKK_FS0624	**High Volume S/N :**	5329
Calibrator Model :	TE-5028A	**Calibrator Slope :**	1.03002
Calibrator S/N :	2584	**Calibrator Intercept :**	-0.01418

Test No.	Delta H_2O (inch)	Qa (m^3/min)	I : Chart (CFM)	Linear Regression
1	2.2	0.926	32	Slope : 37.8016
2	2.6	1.006	36	Intercept : -2.5182
3	3.2	1.114	40	Correlation Coefficient : 0.9971
4	4.0	1.244	44	
5	4.6	1.333	48	



Calibrated by _____

(Mr. Prommee Sripatnet)
BKK Field Services Scientist (2)

Approved by : _____

(Mr. Warakorn Pookrak)
Field Services Supervisor

Accredited by

NSC-TISI-TIS 17025
Calibration 0426

NSC-TISI-TIS 17025
CALIBRATION 0426

Calibration certificate

Calibration Certificate No. 25BCI0197

Object	Electronic non-automatic weighing instrument
Manufacturer	Ohaus
Type	EX225D/AD
Serial | QM Ident. no.	C309774648 | BKK_EN0403
Customer	ALS Laboratory Group (Thailand)Co., Ltd. 104 Phatthanakarn 40,Phattanakarn Rd.,Khwaeng Phatthanakarn ,Khet Suan Luang,Bangkok 10250
Order no.	261969
Number of pages	6
Date of calibration	30 May 2025

This calibration certificate documents the traceability to national standards.

Uncertainties of measurements are taken into account when only statements of compliance are made.

This certificate was prepared by Sartorius Corporation in accordance to the current ISO/IEC 17025:2017 standard and Sartorius Work Instruction (Method) SOP WI 08.

This certificate relate and apply this equipment only.

REVIEW BY ..... Linda K .....

APPROVED BY ..... Siriluk P. .....

NEXT CAL DATE ..... 30/05/26 .....

This calibration certificate may not be reproduced other than in full except with the permission of NSC-TISI-TIS-17025 and the issuing laboratory. Calibration certificates without signature are not valid.

The user is obliged to have the object recalibrated at appropriate intervals.

Date	Approval of the Calibration Certificate	Person in charge
30 May 2025	Mr. Chonchai Inthana	Chonchai Inthana

Calibration object

Multi range instrument

Model	EX225D/AD	
Serial Number	C309774648	
QM Ident. no | Inventory no.	BKK_EN0403 | ---	
Range	1	2
Maximum capacity (Max. load)	120.00000 g	220.0000 g
Measured range	120.00000 g	220.0000 g
Scale interval	0.00001 g	0.0001 g

Place of calibration

Address	According to page 1
Department | Cost center	Environment Department. | ---
Building | Floor	--- | 1st Floor.
Room	Laboratory Room.
Maximum temperature variation at place of calibration	5 K

Calibration procedure

EURAMET cg-18, V4.0 - Guidelines on the Calibration of Non-Automatic Weighing Instruments

Test equipment

Test equipment type	Test equipment ID	Valid until
Thermometer	Testo 174(Traceable to Si unit through ENTECH)	11 Nov 2025
Test weight set OIML R111 E2	Certificate No.M2308197S ,E2(Traceable to SI unit through TCS)	23 Aug 2025

Range 1

Adjustment Status

The measuring device was internally adjusted before the calibration.

Environmental and measuring conditions

Date of calibration	30 May 2025
Temperature at place of calibration | Temp. diff. $T_{weights}$ - T_{place}	21.7 °C | 0.5 K
Measuring conditions	The installation site is suitable. The device was levelled. Balance was loaded up to Max before test.
Comments	Humidity 60.0 %RH.

Measurement results | Measurement uncertainties

Repeatability

Test load (nominal): 1 g | 100 g		
	1 g	**100 g**
1	0.99993 g	99.99971 g
2	0.99991 g	99.99971 g
3	0.99992 g	99.99974 g
4	0.99993 g	99.99973 g
5	0.99992 g	99.99974 g
6	0.99991 g	99.99970 g
7	0.99993 g	99.99973 g
8	0.99994 g	99.99972 g
9	0.99995 g	99.99971 g
10	0.99995 g	99.99969 g
	s = 0.000014 g	s = 0.000017 g

Eccentricity

Test load (nominal):	**50 g**
Center	49.99996 g
Front left	49.99993 g
Back left	49.99993 g
Back right	49.99994 g
Front right	49.99990 g
Maximum deviation from centric loading indication $\lvert\Delta I_{ecc}\rvert_{max}$ = 0.00006 g	

Error of indication

Testload ***L***	**Indication** ***I***	**Error** ***E***	**Expansion factor** ***k***	**Uncertainty** ***U(E)***	**Uncertainty relative** $U_{rel}(E)$
0.00000 g	0.00000 g	0.00000 g	2.00	0.000030 g	---
0.01000 g	0.00995 g	-0.00005 g	2.00	0.000037 g	0.37 %
0.10000 g	0.09991 g	-0.00009 g	2.00	0.000038 g	0.038 %
0.50000 g	0.49985 g	-0.00015 g	2.00	0.000040 g	0.0080 %
1.00000 g	0.99991 g	-0.00009 g	2.00	0.000041 g	0.0041 %
5.00002 g	4.99997 g	-0.00005 g	2.00	0.000050 g	0.0010 %
10.00002 g	10.00003 g	0.00001 g	2.00	0.000069 g	0.00069 %
50.00002 g	49.99972 g	-0.00030 g	2.00	0.000091 g	0.00018 %
70.00004 g	69.99975 g	-0.00029 g	2.00	0.00017 g	0.00024 %
100.00001 g	99.99958 g	-0.00043 g	2.00	0.00017 g	0.00017 %
115.00006 g	114.99966 g	-0.00040 g	2.00	0.00028 g	0.00024 %
Maximum error of indication		$\lvert E\rvert_{max}$ = 0.00043 g			

$U_{rel}(E)$ is the quotient of $U(E)$ and test load L. The uncertainty of measurement $U(E)$ is valid only if error E is considered. You will find reference notes on the uncertainty of measurement in use under: Appendix to the calibration certificate | Interpretation of measurement results.
Reference note: The reported expanded uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the documented Expansion factor, determined in accordance with the European Calibration Guideline EURAMET cg-18, V4.0. There is a 95 % probability that the value of the measurand will be in the assigned value range.

Range 2

Adjustment Status

The measuring device was internally adjusted before the calibration.

Environmental and measuring conditions

Date of calibration	30 May 2025
Temperature at place of calibration | Temp. diff. $T_{weights}$ - T_{place}	21.7 °C | 0.5 K
Measuring conditions	The installation site is suitable. The device was levelled. Balance was loaded up to Max before test.
Comments	Humidity 60.0 %RH.

Measurement results | Measurement uncertainties

Repeatability

Test load (nominal): 200 g	
	200 g
1	199.9998 g
2	199.9998 g
3	199.9998 g
4	200.0000 g
5	199.9998 g
6	199.9999 g
7	199.9999 g
8	200.0000 g
9	199.9998 g
10	199.9999 g
	s = 0.00008 g

Eccentricity

Test load (nominal):	**100 g**
Center	99.99984 g
Front left	99.99990 g
Back left	99.99983 g
Back right	99.99979 g
Front right	99.99979 g
Maximum deviation from centric loading indication $\lvert\Delta I_{ecc}\rvert_{max}$ = 0.00006 g	

Error of indication

Testload ***L***	**Indication** ***I***	**Error** ***E***	**Expansion factor** ***k***	**Uncertainty** ***U(E)***	**Uncertainty relative** $U_{rel}(E)$
0.00000 g	0.00000 g	0.00000 g	2.00	0.000030 g	---
20.00002 g	19.99986 g	-0.00016 g	2.00	0.000069 g	0.00034 %
50.00002 g	49.99978 g	-0.00024 g	2.00	0.000091 g	0.00018 %
70.00004 g	69.99981 g	-0.00023 g	2.00	0.00017 g	0.00024 %
90.00007 g	89.99976 g	-0.00031 g	2.00	0.00018 g	0.00020 %
110.00003 g	109.99986 g	-0.00017 g	2.00	0.00028 g	0.00025 %
130.0001 g	129.9999 g	-0.0002 g	2.00	0.00028 g	0.00022 %
150.0000 g	149.9999 g	-0.0001 g	2.00	0.00028 g	0.00019 %
170.0000 g	170.0000 g	0.0000 g	2.00	0.00028 g	0.00016 %
200.0000 g	199.9998 g	-0.0002 g	2.00	0.00028 g	0.00014 %
220.0000 g	219.9999 g	-0.0001 g	2.00	0.00029 g	0.00013 %
Maximum error of indication		$\lvert E\rvert_{max}$ = 0.0003 g			

$U_{rel}(E)$ is the quotient of $U(E)$ and test load L. The uncertainty of measurement $U(E)$ is valid only if error E is considered. You will find reference notes on the uncertainty of measurement in use under: Appendix to the calibration certificate | Interpretation of measurement results.
Reference note: The reported expanded uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the documented Expansion factor, determined in accordance with the European Calibration Guideline EURAMET cg-18, V4.0. There is a 95 % probability that the value of the measurand will be in the assigned value range.

End of calibration certificate

Uncertainty of measurement in use

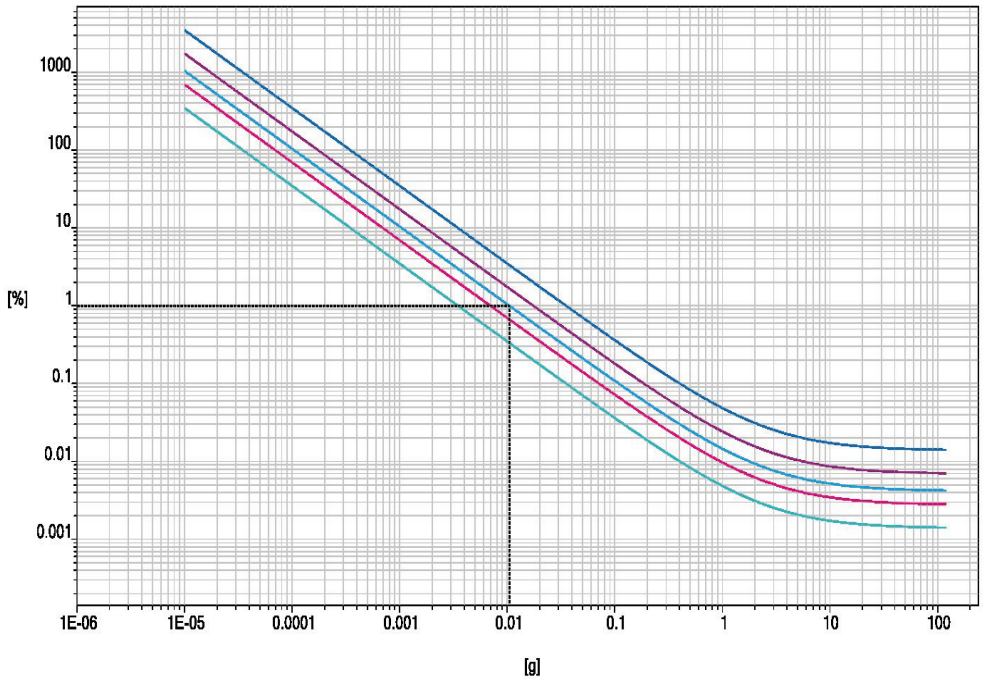
Range 1

Device adjusted before measurement	Yes
Temperature deviation considered	5 K
Temperature coefficient considered	$2 \cdot 10^{-6}$/K
Uncertainty of the weighing result $U_{gl}(W)$	**$U_{gl}(W) = 0.000035\ g + 1.38 \cdot 10^{-5} \cdot R$**

Reference note: The current uncertainty of measurement is calculated by entering of the reading *R* into this formula. In relation to this, there is no need for a correction of the indication error. The reported expanded uncertainty of measurement is stated as the standard uncertainty of measurement multiplied with an Expansion factor of 2, determined in accordance with the European Calibration Guideline EURAMET cg-18, V4.0. There is a 95 % probability that the value of the measurand will be in the assigned value range.

Indication in % from max load	Net indication *R*	Uncertainty $U_{gl}(W)$	Uncertainty relative $U_{gl}(W)_{rel}$
1 %	1.20000 g	0.000052 g	0.0043 %
25 %	30.00000 g	0.00045 g	0.0015 %
50 %	60.00000 g	0.00086 g	0.0014 %
75 %	90.00000 g	0.0013 g	0.0014 %
100 %	120.00000 g	0.0017 g	0.0014 %

Graphic realization of the relative uncertainty of measurement | process accuracy



Safety factor	
10	
5	
3	
2	
1	

Displayed example

Process accuracy	1.00 %
Safety factor	3
Minimum sample weight	0.01045 g

Uncertainty of measurement in use

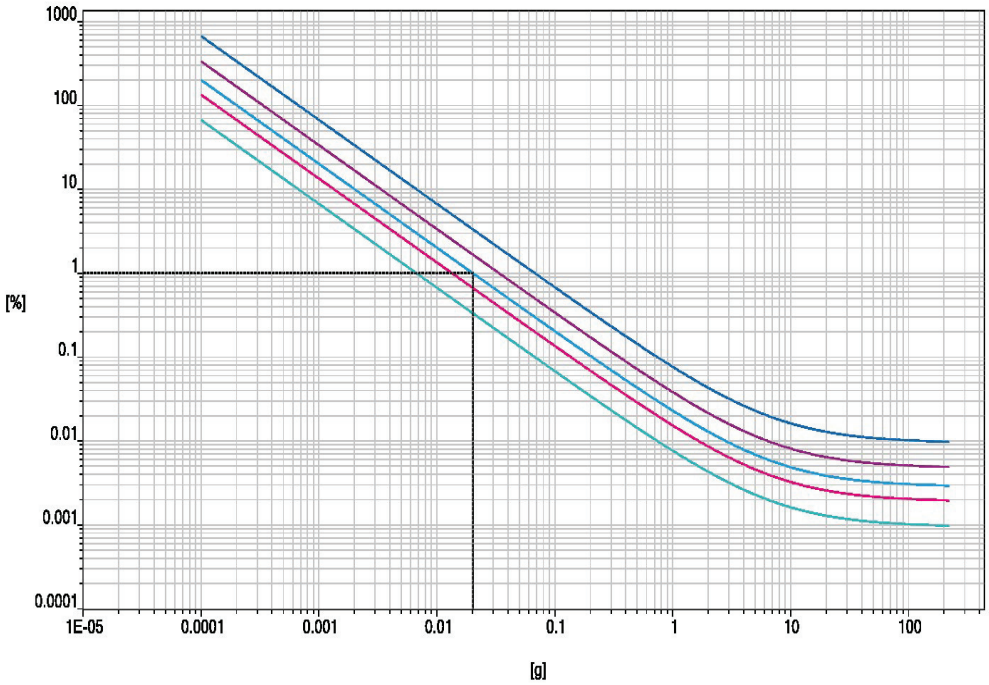
Range 2

Device adjusted before measurement	Yes
Temperature deviation considered	5 K
Temperature coefficient considered	$2 \cdot 10^{-6}$/K
Uncertainty of the weighing result $U_{gl}(W)$	**$U_{gl}(W) = 0.000067\ g + 9.52 \cdot 10^{-6} \cdot R$**

Reference note: The current uncertainty of measurement is calculated by entering of the reading *R* into this formula. In relation to this, there is no need for a correction of the indication error. The reported expanded uncertainty of measurement is stated as the standard uncertainty of measurement multiplied with an Expansion factor of 2, determined in accordance with the European Calibration Guideline EURAMET cg-18, V4.0. There is a 95 % probability that the value of the measurand will be in the assigned value range.

Indication in % from max load	Net indication *R*	Uncertainty $U_{gl}(W)$	Uncertainty relative $U_{gl}(W)_{rel}$
1 %	2.20000 g	0.000088 g	0.0040 %
25 %	55.00000 g	0.00059 g	0.0011 %
50 %	110.00000 g	0.0011 g	0.0010 %
75 %	165.0000 g	0.0016 g	0.00099 %
100 %	220.0000 g	0.0022 g	0.00098 %

Graphic realization of the relative uncertainty of measurement | process accuracy



Safety factor
10
5
3
2
1

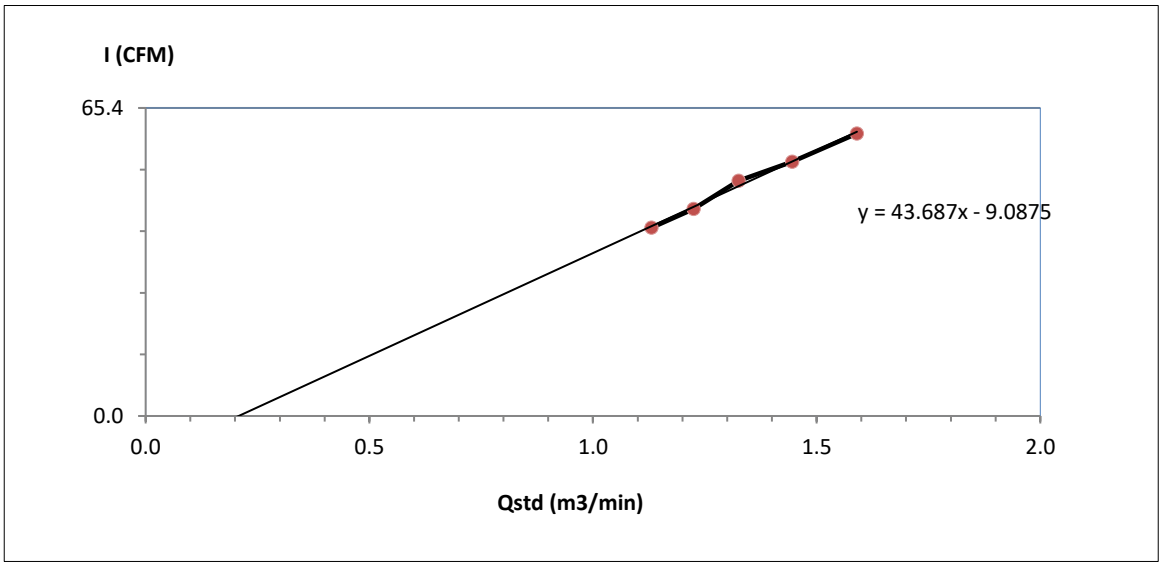
Displayed example

Process accuracy	1.00 %
Safety factor	3
Minimum sample weight	0.02019 g

High Volume Air Sampler Calibration Worksheet

Project Site :	Sukhumvit 59 Company Limited	**Barometric Pressure (mm Hg) :**	758.1
Calibrate Location :	บริเวณพื้นที่โครงการ	**Temperature (°C) :**	31.2
Calibrate Date :	3-Nov-25	**High Volume ID :**	BKK_FS1376
CalibrationSheet No.:	**C-031125-BKK_FS1376**	**High Volume Model :**	TE-5009X
Calibrator ID:	BKK_FS0624	**High Volume S/N :**	6257
Calibrator Model :	TE-5028A	**Calibrator Slope :**	1.64456
Calibrator S/N :	2584	**Calibrator Intercept :**	-0.02267

Test No.	Delta H_2O (inch)	Q_{std} (m^3/min)	I : Chart (CFM)	Linear Regression
1	3.4	1.1310	40	Slope : 43.6871
2	4.0	1.2248	44	Intercept : -9.0875
3	4.7	1.3258	50	Correlation Coefficient : 0.9964
4	5.6	1.4451	54	
5	6.8	1.5901	60	



Calibrated by _____

(Mr. Prommee Sripatnet)
BKK Field Services Scientist (2)

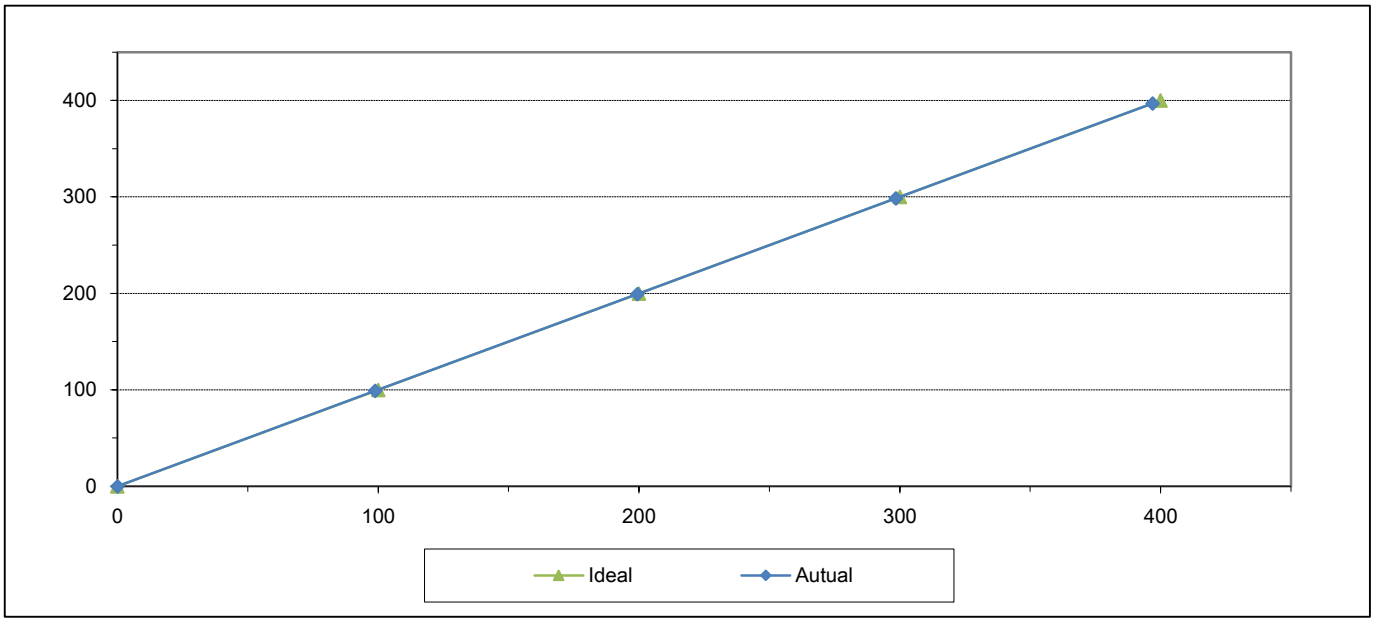
Approved by : _____

(Mr. Warakorn Pookrak)
Field Services Supervisor

MULTIPOINT CALIBRATION REPORT

Calibration Date	1-Jul-25	Equipment Name	THC Analyzer
Manufacturer	HORIBA	Model	APHA-370
Serial No.	C4BHPA0H	Equipment ID	BKK_FS0805
Calibrator Manufacturer	Teledyne API	Model	700
Serial No.	947		
Std. Gas Conc. (PPM C3H8)	50.9	Cylinder No.	D612257
Cylinder Pressure (psi)	1800	Certified By	Linde
Certified Date	27-Jun-18	Expired Date	27-Jun-26

Point	CALIBRATION RESULTS			
	Ideal	Autual	Error	%Error
ZERO	0.00	0.10	0.10	0.10
1	100.00	98.90	-1.10	-1.10
2	200.00	199.40	-0.60	-0.30
3	300.00	298.50	-1.50	-0.50
4	400.00	396.90	-3.10	-0.78
AVERAGE (%)				-0.51



Calibrated By

(Mr.Jirawut Sakarn)
Field Environmental Scientist (3)

Approved By

(Mr.Sarayuth Jittranont)
Assistant General Manager

Metrology

SCI ECO Services Company Limited

33/2 Moo 3, T.Banpa, A.Kaengkhoi, Saraburi 18110, Thailand.

Saraburi Tel : +66 3627 3096 Fax : +66 3627 3100

Bangkok Tel : +668 9205 6851 , +669 8247 2360

Website : www.scieco.co.th E-Mail : calibrate@scg.com

NSC-TISI-TIS 17025
CALIBRATION 0244

Certificate No. T250353

Certificate of Calibration

Equipment	:	**Autoclave**
Manufacturer	:	**TOMY**
Model	:	**SX-700**
Serial No.	:	**48134190**
Customer Code	:	**BKK_ML0041**
ID No.	:	**T7725A3**
Customer	:	**ALS Laboratory Group (Thailand) Co.,Ltd.**
		104 Phatthanakan 40, Phatthanakan Rd., Khwaeng Phatthanakan,
		Khet Suan Luang, Bangkok 10250
Customer Location	:	**Washing Room**
Date of Receipt	:	**26 February 2025**
Calibrated By	:	**Boonchai Suriyawong (Site Calibration Manager)**
Approved By	:	_____ **/ Sujjar Naknakred (Site Calibration Manager)**
Date of Issue	:	10 MAR 2025

REVIEW BY Sithichok
APPROVED BY .....
NEXT CAL. DATE 04/09/26

The uncertainties are for a confidence probability of approximately 95%.

This Certificate is issued in accordance with the conditions of accreditation granted by the Thai Laboratory Accreditation Scheme which has assessed the measurement capability of the laboratory and its traceability to recognized national standards and to the units of measurement realized at the corresponding national standard laboratory. This certificate may not be reproduced other than in full except with the prior written approval of the Metrology.

Certificate No. T250353

Calibration Report

Equipment : **Autoclave**
Date of Calibration : **4 March 2025**
Environment : **Temperature : 22.2-25.4 °C**
Line Voltage : 221.1-224.7 V
Relative Humidity : 55 - 65 %RH

Condition of this results of calibration :

1. This equipment was calibrated by insert 3 standard temperature recorder into its chamber and test according to WI-T23 inhouse method.(based on BS 2646-1 : 2021)
   All data show below were final values and the initial data from customer request . The temperature scale used was based on ITS - 90 .
2. Reference Standard Instrument :

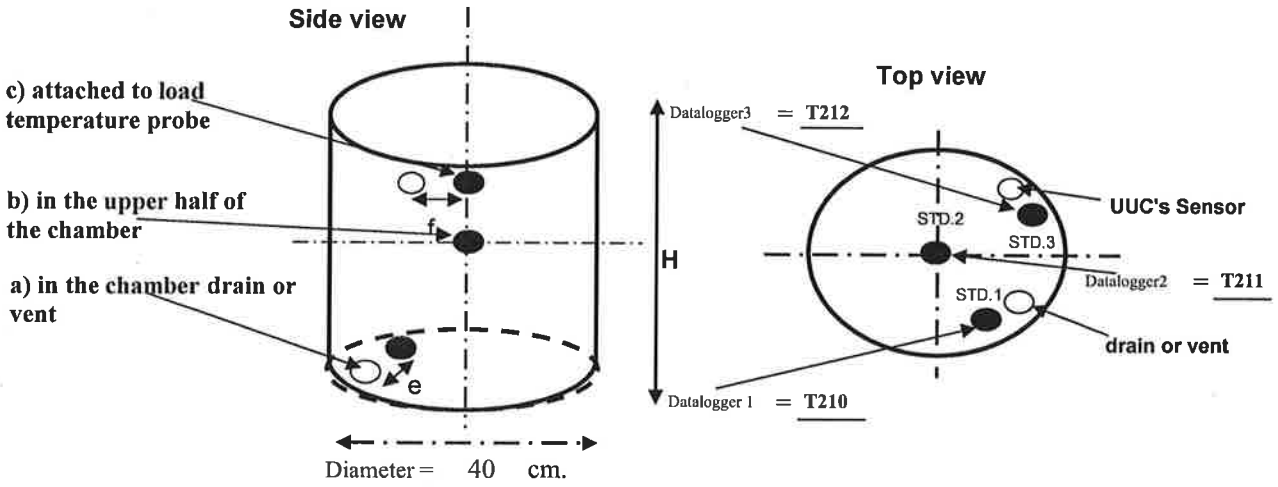
Instrument	Model	Standard No.	Certificate No.	Due Date
1. Temperature recorder	RTD	T210	T242028	11 December 2025
2. Temperature recorder	RTD	T211	T242029	11 December 2025
3. Temperature recorder	RTD	T212	T242030	11 December 2025

3. This certificate is traceable to :
   National Institute of Metrology (Thailand) through Metrological Center (NSC-TISI-TIS 17025 CALIBRATION 0244.)
4. Condition of calibrated item : good
   Equipment Description :
   Pressure Indicator 0.11-0.12 MPa At 121 °C Holding time 20 minute
5. Adjustment :
   (X) without adjustment ( ) after adjustment

Approved By.

Certificate No. T250353

Calibration Report



Remark :

Size of Installed Standard sensor STD.1 : Distance the chamber drain or vent e ≤ 10 cm.(less than or be equal to 10 cm.)

Size of Installed Standard sensor STD.2 : Geometric Center (upper half of the chamber)

Size of Installed Standard sensor STD.3 : Distance UUC's Sensor f = 2 cm.

Measurement Results :

	Average Standard Reading at each position (°C)		
Calibration Point	**T210**	**T211**	**T212**
121	121.2	121.1	121.1

Autoclave			Temperature Distribution				
Setting (°C)	Reading (°C)		Average (°C)	Stability (±°C)	Uniformity (±°C)	Uncertainty (±°C)	Coverage Factor *k*
	Min , Max	Average					
121	-	121	121.2	0.1	0.1	0.65	2.00

*** The quoted uncertainty exclude "uniformity"**

The calibration result apply only the above calibrated item.

The result of test was found accurate as shown on date and place of test only.

The reported expanded uncertainty is based on a standard uncertainty multiplied by a coverage factor *k* which for a t-distribution, providing a level of confidence of approximately 95 % .

End of Certificate

Approved By._____

Metrological Center

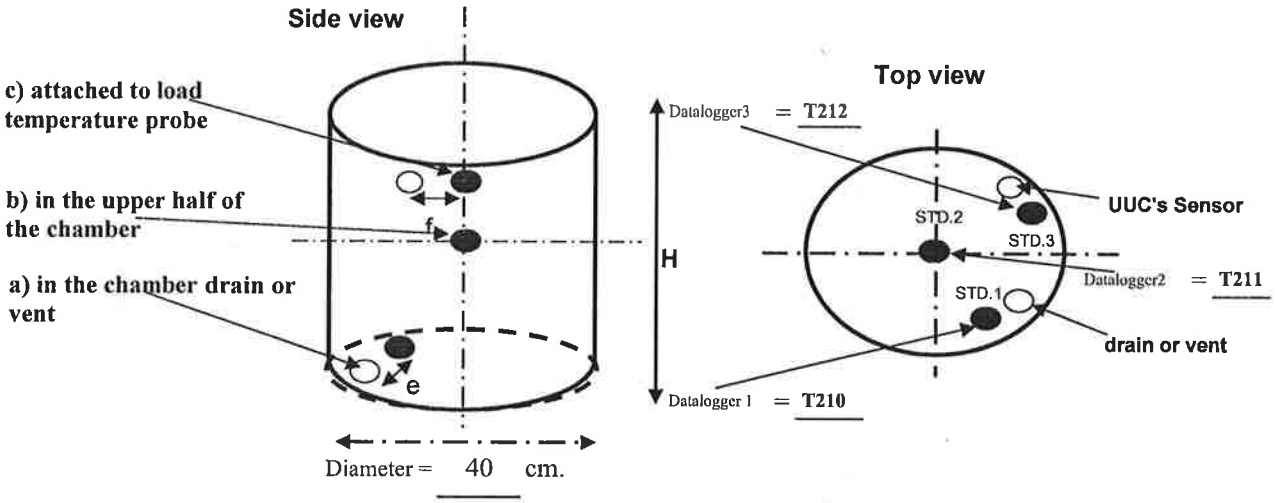
SCI ECO Services Company Limited

33/2 Moo 3, T.Banpa, A.Kaengkhoi, Saraburi 18110

Telephone : +66 2 586 5792-4 Fax : +66 2 586 5109

Website : www.scieco.co.th E-Mail : calibrate@scg.co.th

Calibration Report



Remark :

Size of Installed Standard sensor STD.1 : Distance the chamber drain or vent e ≤ 10 cm.(less than or be equal to 10 cm.)

Size of Installed Standard sensor STD.2 : Geometric Center (upper half of the chamber)

Size of Installed Standard sensor STD.3 : Distance UUC's Sensor f = 2 cm.

Measurement Results :

	Average Standard Reading at each position (°C)		
Calibration Point	**T210**	**T211**	**T212**
121	121.18	121.12	121.13

Autoclave			Temperature Distribution				
Setting (°C)	Reading (°C)		Average (°C)	Stability (±°C)	Uniformity (±°C)	Uncertainty (±°C)	Coverage Factor *k*
	Min , Max	Average					
121	-	121	121.16	0.10	0.10	0.65	2.00

*** The quoted uncertainty exclude "uniformity"**

The calibration result apply only the above calibrated item.

The result of test was found accurate as shown on date and place of test only.

The reported expanded uncertainty is based on a standard uncertainty multiplied by a coverage factor *k* which for a t-distribution, providing a level of confidence of approximately 95 % .

End of Certificate

Approved By.

TECHNOLOGY PROMOTION ASSOCIATION (THAILAND-JAPAN)
CORPORATE SERVICES 3: EQUIPMENT CALIBRATION AND TESTING SERVICES
534/4 PATTANAKARN ROAD SOI 18, SUANLUANG, SUANLUANG BANGKOK 10250
TEL.0-2717-3000-29 FAX.0-2719-9484

NSC-TISI-TIS17025
CALIBRATION 0008

Certificate of Calibration

Cert. No.: 25TM1235

Equipment :	Incubator
Manufacturer :	Memmert
Model :	IPP750eco
Serial No. :	V821.0172
ID No. :	BKK_ML0231

REVIEW BY ..... Sithichok T.

APPROVED BY.....

NEXT CAL DATE..... 21/08/26

Submitted by : ALS Laboratory Group (Thailand) Co.,Ltd.
104 Phatthanakan 40, Phatthanakan Rd.,
Khwaeng Phatthanakan, Khet Suan Luang ,
Bangkok 10250 Thailand

Location : Incubation & Microbiological Reading

Received Order : 21 August 2025
Calibration Date : 21 August 2025
Ambient Temperature : (26 ± 10) °C
Relative Humidity : (50 ± 30) %
AC Line Voltage : (220 ± 22) V

Calibrated by : Khit Ruttanaprapachai

Approved by : Kunchit

Approved Signatory

( ) Chakrit Waewwanjua
( ) Suwit Imjai
(✓) Kunchit Promprat

Issue Date : 25 August 2025

The Uncertainties are for a confidence probability of approximately 95%

This certificate may not be reproduced other than in full, except with the prior written
Approval of the head of Corporate Services 3 : Equipment Calibration and Testing Services.

Equipment : Incubator
Condition As-Received : Used Item
Reference : 2508-0459OC-2

Cert. No.: 25TM1235

Procedure Used :-

Calibration were conducted using calibration procedure CP-OT02 based on TLAS G-20 according to direct measurement method with Data Acquisition which connected with Resistance Temperature Detector (RTD).

The temperature scale used was based on ITS-90.

Condition of this result of calibration

1. Reference standard instrument:-

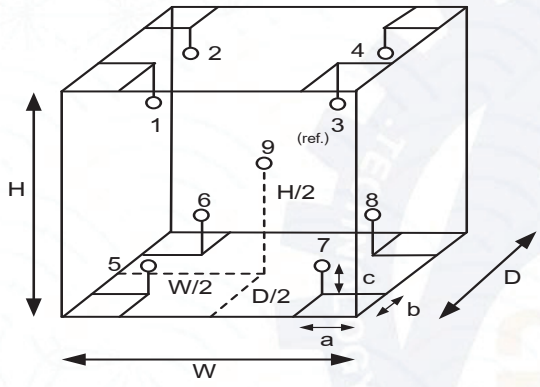
Instrument	Serial No.	Cert. No.	Traceable	Due Date
1) Data Acquisition	MY44073381	25LM82	TPA	17 May 2026

2. This certificate is valid only to the item calibrated on date and place of calibration.
3. This measurement result is traceable to the International System of Unit maintained through :

Remark : TPA : Technology Promotion Association (Thailand - Japan)

Result of Calibration :- (*) Without Adjustment
Function of UUC* : Temperature Source
Fresh air setting : Not Available

Environment during calibration		
	Beginning	Finished
Temp. (°C)	21	20
REL.Humid. (%)	62	65
AC Supply (Volt)	222	221



Position :	Ref. Std. ID No.:
1	25-01RTD-01
2	25-01RTD-02
3	25-01RTD-03
4	25-01RTD-04
5	25-01RTD-05
6	25-01RTD-06
7	25-01RTD-07
8	25-01RTD-08
9 (ref.)	25-01RTD-09

Probe Installation Details :

a =	10	cm
b =	10	cm
c =	10	cm

Dimension of Chamber :

D =	0.60	m
W =	1.0	m
H =	1.2	m
Capacity =	0.75	m^3

Equipment : Incubator
Condition As-Received : Used Item
Reference : 2508-0459OC-2
Result of Calibration :- (*) Without Adjustment
Function of UUC* : Temperature Source
Fresh air setting : Not Available

Cert. No.: 25TM1235

Calibration Point (°C)	UUC* Setting (°C)	UUC* Reading (°C)	Temperature stability (± °C)	Temperature uniformity (°C)	Overall Variation (°C)	Coverage Factor *k*
35.0	35.0	35.0	0.12	0.37	0.43	2
37.0	37.0	37.0	0.15	0.47	0.49	2
41.5	41.5	41.5	0.13	0.79	0.84	2

Calibration Point (°C)	Measured Temperature (°C) Position									Uncertainty (±°C)
	1	2	3	4	5	6	7	8	9 (ref.)	
35.0	34.834	34.929	34.924	34.849	34.856	34.954	35.002	35.002	35.127	0.30
37.0	36.940	37.065	37.010	36.921	36.883	36.973	37.043	37.045	37.235	0.31
41.5	41.641	41.838	41.742	41.484	41.249	41.427	41.466	41.495	41.926	0.34

Average* : The average of 30 values in each position.
Temperature stability : One-half of the greatest maximum difference of measured temperature at any one sensor.
Temperature uniformity : The maximum difference of measured temperatures at any sensors and the measured temperature at the reference location which are observed at the same time or at as close an observation time as possible to determine the temperature pattern or homogeneity within the chamber under steady-state conditions.
Overall Variation : The Difference of the maximum and minimum measured temperatures throughout observation.
UUC* : Unit Under Calibration
Note : The reported uncertainty of measurement was included stability and excluded uniformity .

The reported uncertainty of measurement was based on a standard uncertainty multiplied by a coverage factor ***k***, providing a level of confidence of approximately 95 %.

-o0o-

TECHNOLOGY PROMOTION ASSOCIATION (THAILAND-JAPAN)
CORPORATE SERVICES 3: EQUIPMENT CALIBRATION AND TESTING SERVICES
534/4 PATTANAKARN ROAD SOI 18, SUANLUANG, SUANLUANG BANGKOK 10250
TEL.0-2717-3000-29 FAX.0-2719-9484

NSC-TISI-TIS17025
CALIBRATION 0008

Certificate of Calibration

Cert. No.: 24TM667
Page : 1 of 3

Equipment :	Hot Air Oven
Manufacturer :	Binder
Model :	ED 240/E2
Serial No. :	00-15533
ID No. :	BKK_ML0013

REVIEW BY ..... Sithichok T.
APPROVED BY.....
NEXT CAL DATE..... 23/10/25

Submitted by :	ALS Laboratory Group (Thailand) Co.,Ltd. 104 Phatthanakan 40, Phatthanakan Rd., Khwaeng Phatthanakan, Khet Suan Luang, Bangkok 10250 Thailand
Location :	Media Preparation Room
Received Order :	23 April 2024
Calibration Date :	23 April 2024
Ambient Temperature :	(26 ± 10) °C
Relative Humidity :	(50 ± 30) %
Calibrated by :	Tawatchai Pama

Approved by :

Approved Signatory

( ) Ponpan Paipim
(✓) Suwit Imjai
( ) Kunchit Promprat

Issue Date : 26 April 2024

The Uncertainties are for a confidence probability of approximately 95%

This certificate may not be reproduced other than in full, except with the prior written
Approval of the head of Corporate Services 3 : Equipment Calibration and Testing Services.

Equipment : Hot Air Oven **Cert. No.:** 24TM667

Condition As-Received : Used Item **Page :** 2 of 3

Reference : 2404-0439OC-8

Procedure Used :-

Calibration were conducted using calibration procedure CP-OT02 based on TLAS G-20 according to direct measurement method with Data Acquisition which connected with Thermocouple Type T.

The temperature scale used was based on ITS-90.

Condition of this result of calibration

1. Reference standard instrument:-

Instrument	Serial No.	Cert. No.	Traceable	Due Date
1) Data Acquisition	MY49001451	24LM44	TPA	17 Mar 2025

2. This certificate is valid only to the item calibrated on date and place of calibration.
3. This certification is traceable to the International System of Unit.

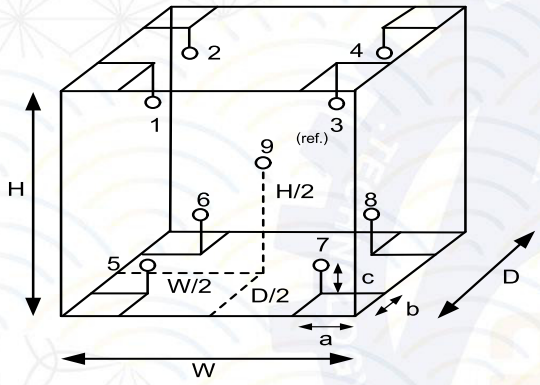
Remark : TPA : Technology Promotion Association (Thailand - Japan)

Result of Calibration :- (*) Without Adjustment

Function of UUC* : Temperature Source

Fresh air setting : Close

Environment during calibration		
	Beginning	Finished
Temp. (°C)	24	23
REL.Humid. (%)	65	65
AC Supply (Volt)	223	222



Position :	Ref. Std. ID No.:
1	24-19TC-01
2	24-19TC-02
3	24-19TC-03
4	24-19TC-04
5	24-19TC-05
6	24-19TC-06
7	24-19TC-07
8	24-19TC-08
9 (ref.)	24-19TC-09

Probe Installation Details :

a = 10 cm

b = 10 cm

c = 10 cm

Dimension of Chamber :

D = 0.50 m

W = 0.80 m

H = 0.60 m

Capacity = 0.24 m^3

Equipment : Hot Air Oven **Cert. No.:** 24TM667

Condition As-Received : Used Item

Reference : 2404-0439OC-8

Result of Calibration :- (*) Without Adjustment

Function of UUC* : Temperature Source

Fresh air setting : Close

Calibration Point (°C)	UUC* Setting (°C)	UUC* Reading (°C)	Temperature stability (± °C)	Temperature uniformity (°C)	Overall Variation (°C)	Coverage Factor *k*
180	180	180	0.64	2.7	3.7	2

Calibration Point (°C)	Measured Temperature (°C) Position									Uncertainty (±°C)
	1	2	3	4	5	6	7	8	9 (ref.)	
180	181.009	181.511	180.922	181.359	181.217	183.659	181.664	181.986	181.474	1.5

Average* : The average of 30 values in each position.

Temperature stability : One-half of the greatest maximum difference of measured temperature at any one sensor.

Temperature uniformity : The maximum difference of measured temperatures at any sensors and the measured temperature at the reference location which are observed at the same time or at as close an observation time as possible to determine the temperature pattern or homogeneity within the chamber under steady-state conditions.

Overall Variation : The Difference of the maximum and minimum measured temperatures throughout observation.

UUC* : Unit Under Calibration

Note : The reported uncertainty of measurement was included stability and excluded uniformity .

The reported uncertainty of measurement was based on a standard uncertainty multiplied by a coverage factor ***k***, providing a level of confidence of approximately 95 %.

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TECHNOLOGY PROMOTION ASSOCIATION (THAILAND-JAPAN)
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534/4 PATTANAKARN ROAD SOI 18, SUANLUANG, SUANLUANG BANGKOK 10250
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NSC-TISI-TIS17025
CALIBRATION 0008

Certificate of Calibration

Cert. No.: 25TM525
Page : 1 of 3

REVIEW BY ..... SithichokT. .....

APPROVED BY.....

NEXT CAL DATE..... 09/04/27 .....

Equipment :	Hot Air Oven
Manufacturer :	Binder
Model :	ED 240/E2
Serial No. :	00-15533
ID No. :	BKK_ML0013
Submitted by :	ALS Laboratory Group (Thailand) Co.,Ltd. 104 Phatthanakan 40, Phatthanakan Rd., Khwaeng Phatthanakan, Khet Suan Luang, Bangkok 10250 Thailand
Location :	Media Preparation Room
Received Order :	08 October 2025
Calibration Date :	09 October 2025
Ambient Temperature :	(26 ± 10) °C
Relative Humidity :	(50 ± 30) %
AC Line Voltage :	(220 ± 22) V

Calibrated by : Uthen Kankawi

Approved by : Kunchit.

Approved Signatory

( ) Chakrit Waewwanjua
( ) Suwit Imjai
(✓) Kunchit Promprat

Issue Date : 16 October 2025

The Uncertainties are for a confidence probability of approximately 95%

This certificate may not be reproduced other than in full, except with the prior written Approval of the head of Corporate Services 3 : Equipment Calibration and Testing Services.

Equipment : Hot Air Oven
Condition As-Received : Used Item
Reference : 2510-0042OC-3

Cert. No.: 25TM525

Procedure Used :-

Calibration were conducted using calibration procedure CP-OT02 based on TLAS G-20 according to direct measurement method with Data Acquisition which connected with Thermocouple Type T.

The temperature scale used was based on ITS-90.

Condition of this result of calibration

1. Reference standard instrument:-

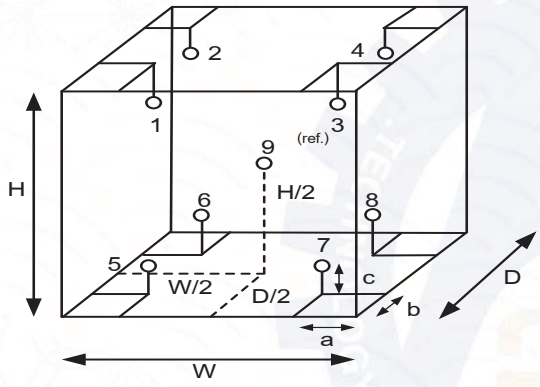
Instrument	Serial No.	Cert. No.	Traceable	Due Date
1) Data Acquisition	MY59003411	24LM192	TPA	24 Dec 2025

2. This certificate is valid only to the item calibrated on date and place of calibration.
3. This measurement result is traceable to the International System of Unit maintained through :

Remark : TPA : Technology Promotion Association (Thailand - Japan)

Result of Calibration :- (*) Without Adjustment
Function of UUC* : Temperature Source
Fresh air setting : Close

Environment during calibration		
	Beginning	Finished
Temp. (°C)	23	24
REL.Humid. (%)	54	56
AC Supply (Volt)	220	221



Position :	Ref. Std. ID No.:
1	23-20TC-01
2	23-20TC-02
3	23-20TC-03
4	23-20TC-04
5	23-20TC-05
6	23-20TC-06
7	23-20TC-07
8	23-20TC-08
9 (ref.)	23-20TC-09

Probe Installation Details :

a =	5.0	cm
b =	5.0	cm
c =	5.0	cm

Dimension of Chamber :

D =	0.50	m
W =	0.80	m
H =	0.60	m
Capacity =	0.24	m^3

Equipment : Hot Air Oven
Condition As-Received : Used Item
Reference : 2510-0042OC-3
Result of Calibration :- (*) Without Adjustment
Function of UUC* : Temperature Source
Fresh air setting : Close

Cert. No.: 25TM525

Calibration Point (°C)	UUC* Setting (°C)	UUC* Reading (°C)	Temperature stability (± °C)	Temperature uniformity (°C)	Overall Variation (°C)	Coverage Factor *k*
170	170	170	0.45	1.3	2.3	2

Calibration Point (°C)	Measured Temperature (°C) Position									Uncertainty (±°C)
	1	2	3	4	5	6	7	8	9 (ref.)	
170	169.588	170.427	168.486	168.900	169.725	169.499	168.946	169.327	169.529	1.3

Average* : The average of 30 values in each position.
Temperature stability : One-half of the greatest maximum difference of measured temperature at any one sensor.
Temperature uniformity : The maximum difference of measured temperatures at any sensors and the measured temperature at the reference location which are observed at the same time or at as close an observation time as possible to determine the temperature pattern or homogeneity within the chamber under steady-state conditions.
Overall Variation : The Difference of the maximum and minimum measured temperatures throughout observation.
UUC* : Unit Under Calibration
Note : The reported uncertainty of measurement was included stability and excluded uniformity .

The reported uncertainty of measurement was based on a standard uncertainty multiplied by a coverage factor ***k***, providing a level of confidence of approximately 95 %.

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TECHNOLOGY PROMOTION ASSOCIATION (THAILAND-JAPAN)
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NSC-TISI-TIS17025
CALIBRATION 0008

Certificate of Calibration

Cert. No.: 25TM460

REVIEW BY ..... SithichokT. .....

APPROVED BY .....

NEXT CAL DATE..... 04/03/26 .....

Equipment :	Water Bath
Manufacturer :	Memmert
Model :	WNE 45
Serial No. :	L712.0429
ID No. :	BKK_ML0056
Submitted by :	ALS Laboratory Group (Thailand) Co.,Ltd. 104 Phatthanakan 40, Phatthanakan Rd., Khwaeng Phatthanakan, Khet Suan Luang, Bangkok 10250 Thailand
Location :	Incubation & Microbiological Reading
Received Order :	04 March 2025
Calibration Date :	04 March 2025
Ambient Temperature :	(26 ± 10) °C
Relative Humidity :	(50 ± 30) %
AC Line Voltage :	(220 ± 22) V

Calibrated by : Khit Ruttanaprapachai

Kunchit

Approved by :

Approved Signatory

( ) Chakrit Waewwanjua
( ) Suwit Imjai
(✓) Kunchit Promprat

Issue Date : 06 March 2025

The Uncertainties are for a confidence probability of approximately 95%

This certificate may not be reproduced other than in full, except with the prior written Approval of the head of Corporate Services 3 : Equipment Calibration and Testing Services.

Equipment : Water Bath **Cert. No.:** 25TM460
Condition As-Received : Used Item **Page :** 2 of 3
Reference : 2503-0006OC-2
Procedure Used :-

Calibration were conducted using in-house calibration procedure CP-OT04 Based on ASTM E715 according to direct measurement method with Data Acquisition which connected with Industrial Platinum Resistance Thermometer (IPRT).

The temperature scale used was based on ITS-90.

Condition of this result of calibration

1. Reference standard instrument:-

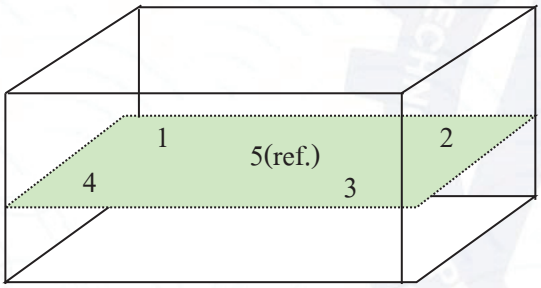
Instrument	Serial No.	Cert. No.	Traceable	Due Date
1) Data Acquisition	MY44073381	23LM73	TPA	18 May 2025

2. This certificate is valid only to the item calibrated on date and place of calibration.
3. This certification is traceable to the International System of Unit.

Remark : TPA : Technology Promotion Association (Thailand - Japan)

Result of Calibration :- (*) Without Adjustment
Function of UUC* : Temperature Source
Heat transfer medium used : Water

	Environmental		AC Voltage Supply
	(°C)	(%R.H.)	(Volt)
Beginning of Calibration	24	49	220
Finished of Calibration	25	51	221



Front

Position :	Ref. Std. S/N.:
1	4803988-006
2	4803988-007
3	4804539-014
4	4804539-015
5(ref.)	4804539-016

Equipment : Water Bath
Condition As-Received : Used Item
Reference : 2503-0006OC-2
Result of Calibration :- (*) Without Adjustment
Function of UUC* : Temperature Source

Cert. No.: 25TM460

Calibration point (°C)	UUC* Setting (°C)	UUC* Reading (°C)	Average* Standard Reading (°C) Position					Uncertainty (± °C)
			1	2	3	4	5 (ref.)	
44.5	44.5	44.5	44.489	44.469	44.497	44.476	44.479	0.15
45.0	45.0	45.0	44.990	44.966	44.997	44.983	44.980	0.15

Calibration point (°C)	Uniformity (°C)	Stability (± °C)	Coverage Factor *k*
44.5	0.045	0.035	2
45.0	0.047	0.031	2

Average* : The average of 30 values in each position.
Uniformity : The maximum difference of measured temperatures at any sensors and the measured temperature at the reference location which are observed at the same time or at as close an observation time as possible to determine the temperature pattern or homogeneity within the chamber under steady-state conditions.
Stability : One-half of the greatest maximum difference of measured temperature at any one probe.
UUC* : Unit Under Calibration
Note : The reported uncertainty of measurement was included stability and excluded uniformity.

The reported uncertainty of measurement was based on a standard uncertainty multiplied by a coverage factor ***k***, providing a level of confidence of approximately 95 %.

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TECHNOLOGY PROMOTION ASSOCIATION (THAILAND-JAPAN)
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NSC-TISI-TIS17025
CALIBRATION 0008

Certificate of Calibration

Equipment :	pH Meter
Manufacturer :	Hach
Model :	HQ411d
Serial No. :	200100031163
ID No. :	BKK_EN0342
Condition As-Received:	Used Item
Received Date :	16 October 2024
Calibration Date :	17 October 2024
Reference :	2410-0548DSC-5
Submitted by :	ALS Laboratory Group (Thailand) Co.,Ltd. 104 Phatthanakan 40, Phatthanakan Rd., Khwaeng Phatthanakan, Khet Suan Luang, Bangkok 10250 Thailand
Ambient Temperature :	(25 ± 2.5) °C
Relative Humidity :	(50 ± 15) %
Calibration Procedure :	In - house method : - CP-CH5 by direct measurement with certified reference material (CRM) - CP-CH8 by comparison with temperature standard

REVIEW BY ..... Sirilak P. .....

APPROVED BY ..... Sirilak P. .....

NEXT CAL DATE..... 17/10/25 .....

Calibrated by : Warakorn Lerngagtrakul

Approved by : Saithip

Approved Signatory

( ) Unnopphol Harachai
( ) Ponpan Paipim
(✓) Saithip Meangmai

Issue Date : 21 October 2024

The Uncertainties are for a confidence probability of approximately 95%

This certificate may not be reproduced other than in full, except with the prior written Approval of the head of Corporate Services 3 : Equipment Calibration and Testing Services.

Condition of this calibration result

1. Reference Standard Instrument

Instrument	Serial No.	ID No.	Cert. No.	Due Date
1)Ref. Standard Thermometer	2188080	130RC044	24I1022	16 Sep 2025

- This Certification is traceable to SI Throught Technology Promotion Association (Thailand - Japan)

2. Certified Reference Materials :The measurement results are traceable to SI through Hach Lenge GmbH Ltd. Deutsche Akkreditierungsstelle, Accredited No.D-RM-15184-01-00
:The measurement results are traceable to SI through CPA chem Ltd., ANSI-ASQ National Accreditation Board, Accredited No. AR-1835

Buffer Solution	Manufacturer	Lot No.	Exp. date
pH 4.008	CPA chem	1034203	27 Sep 2026
pH 6.999	Hach Lenge GmbH	C03145	28 Feb 2026
pH 10.010	CPA chem	1034205	27 Sep 2025

3. This certificate is valid only to the item calibrated on date and place of calibration.

Calibration Results

Function : pH Measurement

Performing three buffers standard curve by using buffer nominal pH (4,7,10)

Unit Under Calibration	Standard pH Buffer Solution	Actual pH Reading	Actual mV Reading (mV)	Uncertainty of pH Measurement (±)	Coverage factor *k*
pH Electrode	4.008	4.028	174.6	0.0044	2.00
S/N.: 230473042902	6.999	7.014	1.4	0.0084	2.05
	10.010	10.018	-172.8	0.0066	2.00

Remark - Can not connect the BNC because the plug does not match with the socket.

Calibration Results

Function : Temperature Measurement

(*) Without adjustment

This equipment was connected with Temperature Probe;

- Model : PHC281
- Serial No. : 230473042902

Dimension of probe

- Length : 103 mm.
- Diameter : 12 mm.
- Immersion Depth : 90 mm.

Calibration Point (°C)	Standard Temperature (°C)	UUC* Reading (°C)	Error (°C)	Uncertainty of measurement (± °C)	Coverage factor *k*
25.0	25.002	25.0	-0.002	0.13	2.00

Remark : UUC* = Unit Under Calibration

The reported uncertainty of measurement was based on a standard uncertainty multiplied by a coverage factor *k*, providing a level of confidence of approximately 95 %.

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TECHNOLOGY PROMOTION ASSOCIATION (THAILAND-JAPAN)
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NSC-TISI-TIS17025
CALIBRATION 0008

Certificate of Calibration

Cert.No.: 25CH1162
Page.: 1 of 3

Equipment :	pH Meter
Manufacturer :	Hach
Model :	HQ411d
Serial No. :	200100031163
ID No. :	BKK_EN0342
Condition As-Received:	Used Item
Received Date :	08 October 2025
Calibration Date :	09 October 2025
Reference :	2510-0271DSC-1
Submitted by :	ALS Laboratory Group (Thailand) Co.,Ltd. 104 Phatthanakan 40, Phatthanakan Rd., Khwaeng Phatthanakan, Khet Suan Luang, Bangkok 10250 Thailand
Ambient Temperature :	(25 ± 2.5) °C
Relative Humidity :	(50 ± 15) %
Calibration Procedure :	In - house method : - CP-CH5 by direct measurement with certified reference material (CRM) - CP-CH8 by comparison with temperature standard

REVIEW BY ..... Sirida K.....

APPROVED BY ..... Siriluk P.....

NEXT CAL DATE..... 09/10/26.....

Calibrated by : Walalak Sirithean

Approved by : Saithip

Approved Signatory

( ) Chakrit Waewwanjua
( ) Ponpan Paipim
(✓) Saithip Meangmai

Issue Date : 10 October 2025

The Uncertainties are for a confidence probability of approximately 95%

This certificate may not be reproduced other than in full, except with the prior written Approval of the head of Corporate Services 3 : Equipment Calibration and Testing Services.

Condition of this calibration result

1. Reference Standard Instrument

Instrument	Serial No.	ID No.	Cert. No.	Due Date
1) Ref. Standard Thermometer	4982054	110RC044	25I708	03 July 2026

- This measurement result is traceable to SI throught Technology Promotion Association (Thailand - Japan)

2. Certified Reference Materials : The measurement results are traceable to SI through CPA chem Ltd., ANSI-ASQ National Accreditation Board, Accredited No. AR-1835

Buffer Solution	Manufacturer	Lot No.	Exp. date
pH 4.007	CPA chem	1114384	12 June 2027
pH 6.965	CPA chem	1066667	18 Jan 2026
pH 10.010	CPA chem	1135355	16 Aug 2026

3. This certificate is valid only to the item calibrated on date and place of calibration.

Calibration Results

Function : pH Measurement

Performing three buffers standard curve by using buffer nominal pH (4,7,10)

Unit Under Calibration	Standard pH Buffer Solution	Actual pH Reading	Actual mV Reading (mV)	Uncertainty of pH Measurement (±)	Coverage factor *k*
pH Electrode	4.007	3.996	176.6	0.0046	2.00
S/N.: 252063043080	6.965	6.974	1.1	0.0084	2.00
	10.010	9.996	-176.9	0.0070	2.00

Remark - Can not connect the BNC because the plug does not match with the socket.

Calibration Results

Function : Temperature Measurement

(*) Without adjustment

This equipment was connected with Temperature Probe;

- Model : PHC281
- Serial No. : 252063043080

Dimension of probe

- Length : 103 mm.
- Diameter : 12 mm.
- Immersion Depth : 90 mm.

Calibration Point (°C)	Standard Temperature (°C)	UUC* Reading (°C)	Error (°C)	Uncertainty of measurement (± °C)	Coverage factor *k*
25.0	25.001	25.0	-0.001	0.13	2.00

Remark - UUC* = Unit Under Calibration

The reported uncertainty of measurement was based on a standard uncertainty multiplied by a coverage factor *k*, providing a level of confidence of approximately 95 %.

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Metrology Center
SCI ECO Services Company Limited

51 Moo 8, Tubkwang, Kaeng Khoi, Saraburi, Thailand 18260

Bangkok Tel : +668 9205 6851 , +669 81924 0059

Saraburi Tel : +669 8247 2360

Website : www.scieco.co.th E-Mail : calibrate@scg.co.th

NSC-TISI-TIS 17025
CALIBRATION 0244

Certificate No. T250873

Certificate of Calibration

Equipment	:	Chamber (Cooling Room)
Manufacturer	:	KOLDTECH
Model	:	KM 320
Serial No.	:	TBN-1012061/05
Customer Code	:	BKK_EN0167
ID No.	:	T2463A3
Customer	:	ALS Laboratory Group (Thailand) Co.,Ltd. 104 Phatthanakan 40, Phatthanakan Rd., Khwaeng Phatthanakan, Khet Suan Luang, Bangkok 10250
Customer Location	:	Laboratory Room
Date of Receipt	:	28 May 2025
Calibrated By	:	Atiphong Rongrat (Technician)
Approved By	:	_____ / Boonchai Suriyawong (Site Calibration Manager)
Date of Issue	:	19 JUN 2025

REVIEW BY ..... Jinda K.

APPROVED BY Siriluk P.

NEXT CAL DATE..... 04/12/26

The uncertainties are for a confidence probability of approximately 95%.

This Certificate is issued in accordance with the conditions of accreditation granted by the Thai Laboratory Accreditation Scheme which has assessed the measurement capability of the laboratory and its traceability to recognized national standards and to the units of measurement realized at the corresponding national standard laboratory. This certificate may not be reproduced other than in full except with the prior written approval of the Metrological Center.

Certificate No. T250873

Calibration Report

Equipment : **Chamber (Cooling Room)**
Date of Calibration : **4 June 2025**
Environment : **Temperature : 23.4-24.9 °C**
Line Voltage : 221.4-230.2 V
Relative Humidity : 55 - 65 %RH

Condition of this results of calibration :

1. Thisequipment was calibrated by insert 16 standard thermocouples type T into its chamber , the other one standard thermocouples type T use for ambient temperature measurement . The calibration was done in according to WI-T20 (based on ASTM E145-94 (Reapproved 2001) and AS2853-1986).
   All data show below were final values and the initial data from customer request . The temperature scale used was based on ITS - 90 .
2. Reference Standard Instrument :

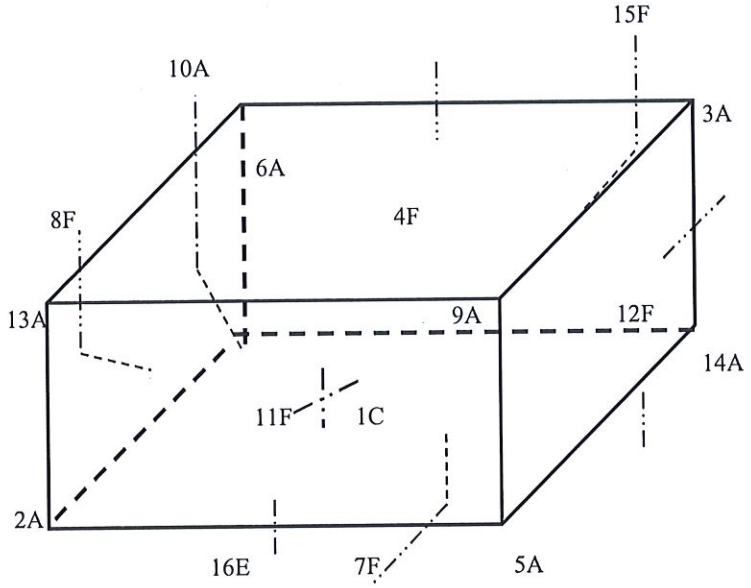
Instrument	Model	Instrument No.	Certificate No.	Due Date
TC	TYPE T	TN91-TN100	T242036	3 December 2025
TC	TYPE T	TN101-TN110	T242036	3 December 2025
DATA LOGGER	34970A	T121	T242036	3 December 2025

3. This certificate is traceable to :
   National Institute of Metrology (Thailand) through Metrological Center (NSC-TISI-TIS 17025 CALIBRATION 0244.)
4. Condition of calibrated item : good
   Equipment Description :
   Time Constant 2 Hour 20 Minute At 3 °C
   Fresh Air Damper ☐ Open ☐ Min ☐ Medium ☐ Max
   ☐ Close
   ☒ Not Available
5. Adjustment :
   (X) without adjustment ( ) after adjustment

Approved By. _____

Certificate No. T250873

Calibration Report



C = Centre , F = Centre of Face , A = Corner , E = Centre of Edge

1C	=	TN91
2A	=	TN92
3A	=	TN93
4F	=	TN94
5A	=	TN95
6A	=	TN96
7F	=	TN97
8F	=	TN98
9A	=	TN99
10A	=	TN100
11F	=	TN101

12F	=	TN102
13A	=	TN103
14A	=	TN104
15F	=	TN105
16E	=	TN106

Approved By. _____

Metrology Center
SCI ECO Services Company Limited
51 Moo 8, Tubkwang, Kaeng Khoi, Saraburi, Thailand 18260

NSC-TISI-TIS 17025
CALIBRATION 0244

Certificate No. T250873

Calibration Report

Measurement Results

	Average Standard Reading at each position (°C)											
Calibration Point	TN91	TN92	TN93	TN94	TN95	TN96	TN97	TN98	TN99	TN100	TN101	TN102
3.0	2.95	2.92	3.09	2.92	3.16	3.50	3.40	3.03	3.14	2.98	3.44	3.13
	TN103	TN104	TN105	TN106								
	3.19	3.06	3.46	2.92								

Chamber (Cooling Room)			Temperature Distribution				
Setting (°C)	Reading (°C)		Average (°C)	Stability (±°C)	Uniformity (°C)	Uncertainty (±°C)	Coverage Factor *k*
	Min , Max	Average					
3.0	2.8 , 3.9	3.4	3.14	1.20	1.30	1.90	2.04

The calibration result apply only the above calibrated item.
The result of test was found accurate as shown on date and place of test only.
The reported expanded uncertainty is based on a standard uncertainty multiplied by a coverage factor *k* which for a t-distribution, providing a level of confidence of approximately 95 % .

Approved By._____

TECHNOLOGY PROMOTION ASSOCIATION (THAILAND-JAPAN)
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TEL.0-2717-3000-29 FAX.0-2719-9484

NSC-TISI-TIS17025
CALIBRATION 0008

Certificate of Calibration

Equipment :	Burette
Capacity :	50 mL
Serial No. :	-
ID. No. :	BKK_EN0422
Manufacturer :	Witeg
Made in :	Germany
Submitted by :	ALS Laboratory Group (Thailand) Co.,Ltd. 104 Phatthanakan 40, Phatthanakan Rd. Khwaeng Phatthanakan, Khet Suan Luang Bangkok 10250 Thailand
Ambient Temperature :	(20 ± 2.5) °C
Relative Humidity :	(50 ± 10) %
Barometric Pressure :	756 mmHg
Calibration Procedure :	ASTM E 542 - 01
Calibrated by :	Sa-ngeunkam Wongsa

REVIEW BY ..... Sirida K.

APPROVED BY ..... Siriluk P.

NEXT CAL DATE..... 03/09/25

Approved by :

Approved Signatory

(✓) Srisuda Khamtha
( ) Ponpan Paipim
( ) Unnopphol Harachai

Issue Date : 3 September 2024

The Uncertainties are for a confidence probability of approximately 95%

This certificate may not be reproduced other than in full, except with the prior written Approval of the head of Corporate Services 3 : Equipment Calibration and Testing Services.

Equipment : Burette
Received Date : 29 August 2024
Condition As-Received : Used Item
Calibration Date : 3 September 2024
Reference : 2408-0944DSC-2

Cert.No.: 24CG3401

Condition of this result of calibration

1. Reference Standard Instruments :

Instruments	Model	Serial No.	ID. No.	Certificate No.	Traceability	Due date
1) Balance	XP205	B134206712	140RC007	24MM316	TPA	15 July 2025
2) Data Logger	HL-20D	20683159	140EC012	23H2174	TPA	10 Oct 2024
3) Thermometer	-	1594592	140EC010	24I175	TPA	22 Feb 2025

This certification is traceable to SI Unit

2. The certificate is valid only to the item calibrated on date and place of calibration.
3. True value is converted to true volume at the standard temperature of 20 $^{\circ}$C

Calibration result :

Nominal capacity (mL)	Reading (mL)	Uncertainty (± mL)	*k* Factor
50	49.9951	0.010	2.00

Remark mL = cm^3

The reported uncertainty of measurement was based on a standard uncertainty multiplied by a coverage factor *k* , providing a level of confidence of approximately 95 %.

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TECHNOLOGY PROMOTION ASSOCIATION (THAILAND-JAPAN)
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NSC-TISI-TIS17025
CALIBRATION 0008

Certificate of Calibration

Cert.No.: 25CG3385
Page.: 1 of 2

Equipment :	Burette
Capacity :	50 mL
Serial No. :	-
ID. No. :	BKK_EN0422
Manufacturer :	Witeg
Made in :	Germany
Submitted by :	ALS Laboratory Group (Thailand) Co.,Ltd. 104 Phatthanakan 40, Phatthanakan Rd., Khwaeng Phatthanakan, Khet Suan Luang, Bangkok 10250 Thailand
Ambient Temperature :	(20 ± 2.5) °C
Relative Humidity :	(50 ± 10) %
Barometric Pressure :	753 mmHg
Calibration Procedure :	ASTM E 542 - 01
Calibrated by :	Srisuda Khamtha
Approved by :	Approved Signatory

REVIEW BY Srisuda K.

APPROVED BY Siriluk P.

NEXT CAL DATE 03/09/26

( ) Ponpan Paipim
(✓) Chakrit Waewwanjua

Issue Date : 3 September 2025

The Uncertainties are for a confidence probability of approximately 95%

This certificate may not be reproduced other than in full, except with the prior written Approval of the head of Corporate Services 3 : Equipment Calibration and Testing Services.

Equipment : Burette
Received Date : 1 September 2025
Condition As-Received : Used Item
Calibration Date : 3 September 2025
Reference : 2509-0049DSC-1

Cert.No.: 25CG3385

Condition of this result of calibration

1. Reference Standard Instruments :

Instruments	Model	Serial No.	ID. No.	Certificate No.	Traceability	Due date
1) Balance	MS204TS	C226356983	140RC010	24MM603	TPA	10 Oct 2025
2) Data Logger	HL-20D	20683159	140EC012	24H2129	TPA	15 Oct 2025
3) Digital Thermometer	HH376	230806555	140EC013	25I1740	TPA	17 Jan 2026

This measurement result is traceable to SI Unit

2. The certificate is valid only to the item calibrated on date and place of calibration.
3. True value is converted to true volume at the standard temperature of 20 $^{\circ}$C

Calibration result :

Nominal capacity (mL)	Reading (mL)	Uncertainty (± mL)	*k* Factor
10	9.9941	0.0082	2.00
25	24.9804	0.0087	2.00
50	49.9819	0.010	2.00

Remark mL = cm^3

The reported uncertainty of measurement was based on a standard uncertainty multiplied by a coverage factor *k* , providing a level of confidence of approximately 95 %.

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Accredited by

NSC-TISI-TIS 17025
Calibration 0426

NSC-TISI-TIS 17025
CALIBRATION 0426

Calibration certificate

Calibration Certificate No. 25BCI0265

Object	Electronic non-automatic weighing instrument
Manufacturer	Sartorius
Type	MSE224S-100-DU
Serial | QM Ident. no.	27405555 | BKK_EN0003
Customer	ALS Laboratory Group (Thailand)Co., Ltd. 104 Phatthanakarn 40,Phattanakarn Rd.,Khwaeng Phatthanakarn ,Khet Suan Luang,Bangkok 10250
Order no.	265054
Number of pages	4
Date of calibration	17 Jul 2025

This calibration certificate documents the traceability to national standards.

Uncertainties of measurements are taken into account when only statements of compliance are made.

This certificate was prepared by Sartorius Corporation in accordance to the current ISO/IEC 17025:2017 standard and Sartorius Work Instruction (Method) SOP WI 08.

This certificate relate and apply this equipment only.

REVIEW BY ..... Sinda K .....

APPROVED BY ..... Siriluk P .....

NEXT CAL DATE..... 17/07/26 .....

This calibration certificate may not be reproduced other than in full except with the permission of NSC-TISI-TIS-17025 and the issuing laboratory. Calibration certificates without signature are not valid.

The user is obliged to have the object recalibrated at appropriate intervals.

Date of issue	Approval of the Calibration Certificate	Person in charge
17 Jul 2025	Mr. Chonchai Inthana	Chonchai Inthana

Calibration object

Single range instrument

Model	MSE224S-100-DU
Serial Number	27405555
QM Ident. no | Inventory no.	BKK_EN0003 | ---

Maximum capacity (Max. load)	220.0000 g
Measured up to	220.0000 g
Scale interval	0.0001 g

Place of calibration

Address	According to page 1
Department | Cost center	ENVI Department | ---
Building | Floor	--- | 1st Floor.
Room	Laboratory Room.
Maximum temperature variation at place of calibration	5 K

Calibration procedure

EURAMET Calibration Guide No. 18, Version 4.0 (11/2015) - Guidelines on the Calibration of Non-Automatic Weighing Instruments

Test equipment

Test equipment type	Test equipment ID	Valid until
Thermometer	Testo 174(Traceable to Si unit through ENTECH)	11 Nov 2025
Test weight set OIML R111 E2	Certificate No.M2308197S ,E2(Traceable to SI unit through TCS)	23 Aug 2025

Adjustment Status

The measuring device was internally adjusted before the calibration.

Environmental and measuring conditions

Date of calibration	17 Jul 2025
Temperature at place of calibration | Temp. diff. $T_{weights}$ - T_{place}	22.5 °C | 0.7 K
Measuring conditions	The installation site is suitable. The device is level. Balance was loaded up to Max before test.
Comments	Humidity 58.0 %RH.

Measurement results | Measurement uncertainties

Repeatability

Test load (nominal): 10 g | 200 g

	10 g	200 g
1	10.0000 g	200.0000 g
2	10.0000 g	199.9999 g
3	10.0000 g	200.0000 g
4	10.0000 g	200.0000 g
5	10.0001 g	199.9999 g
6	10.0000 g	200.0000 g
7	10.0000 g	200.0000 g
8	10.0001 g	200.0000 g
9	10.0000 g	200.0000 g
10	10.0000 g	199.9999 g
	s = 0.00004 g	s = 0.00005 g

Eccentricity

Test load (nominal):	**100 g**
Center	100.0000 g
Front left	100.0001 g
Back left	100.0000 g
Back right	100.0001 g
Front right	100.0001 g
Maximum deviation from centric loading indication $\lvert\Delta I_{ecc}\rvert_{max}$ = 0.0001 g	

Error of indication

Testload L	Indication I	Error E	Expansion factor k	Uncertainty $U(E)$	Uncertainty relative $U_{rel}(E)$
0.0100 g	0.0100 g	0.0000 g	2.00	0.00012 g	1.2 %
0.1000 g	0.1000 g	0.0000 g	2.00	0.00013 g	0.13 %
1.0000 g	1.0000 g	0.0000 g	2.00	0.00013 g	0.013 %
2.0000 g	2.0000 g	0.0000 g	2.00	0.00013 g	0.0065 %
5.0000 g	5.0000 g	0.0000 g	2.00	0.00013 g	0.0026 %
10.0000 g	10.0000 g	0.0000 g	2.00	0.00013 g	0.0013 %
20.0000 g	20.0000 g	0.0000 g	2.00	0.00014 g	0.00068 %
50.0000 g	50.0000 g	0.0000 g	2.00	0.00015 g	0.00029 %
100.0000 g	100.0000 g	0.0000 g	2.00	0.00018 g	0.00018 %
200.0000 g	200.0000 g	0.0000 g	2.00	0.00028 g	0.00014 %
220.0000 g	220.0001 g	0.0001 g	2.00	0.00032 g	0.00015 %
Maximum error of indication		$\lvert E\rvert_{max}$ = 0.0001 g			

$U_{rel}(E)$ is the quotient of $U(E)$ and test load L. The uncertainty of measurement $U(E)$ is valid only if error E is considered. You will find reference notes on the uncertainty of measurement in use under: Appendix to the calibration certificate | Interpretation of measurement results.
Reference note: The reported expanded uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the documented Expansion factor, determined in accordance with the European Calibration Guideline EURAMET cg-18, V4.0. There is a 95 % probability that the value of the measurand will be in the assigned value range.

End of calibration certificate

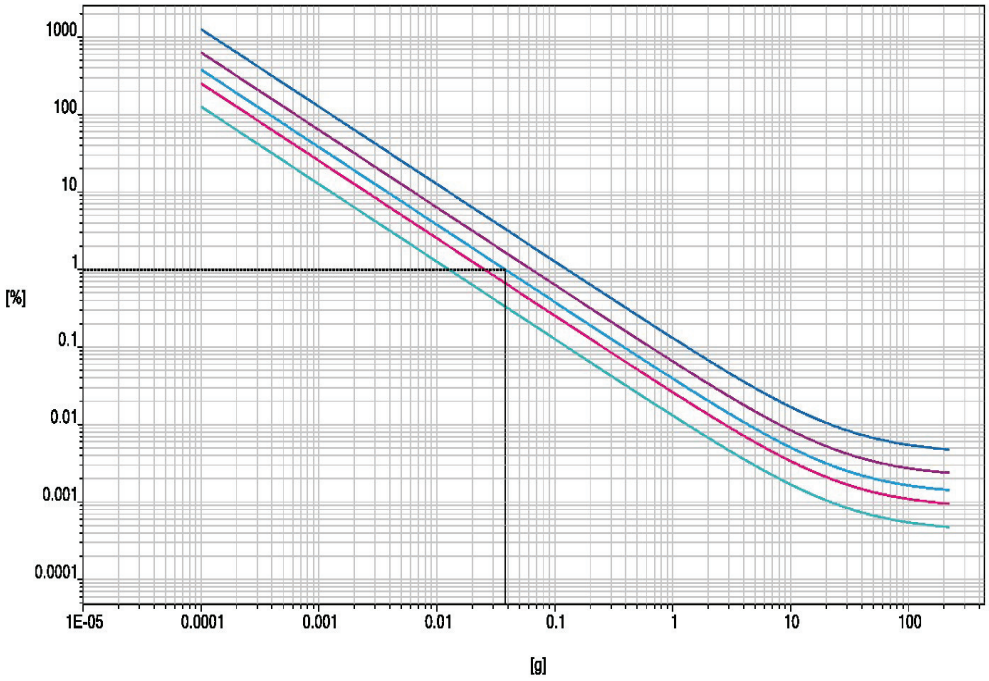
Uncertainty of measurement in use

Device adjusted before measurement	Yes
Temperature deviation considered	1.5 K (isoCAL active)
Temperature coefficient considered	$1 \cdot 10^{-6}$/K
Uncertainty of the weighing result $U_{gl}(W)$	**$U_{gl}(W) = 0.00013\ g + 4.19 \cdot 10^{-6} \cdot R$**

Reference note: The current uncertainty of measurement is calculated by entering of the reading *R* into this formula. In relation to this, there is no need for a correction of the indication error. The reported expanded uncertainty of measurement is stated as the standard uncertainty of measurement multiplied with an Expansion factor of 2, determined in accordance with the European Calibration Guideline EURAMET cg-18, V4.0. There is a 95 % probability that the value of the measurand will be in the assigned value range.

Indication in % from max load	Net indication *R*	Uncertainty $U_{gl}(W)$	Uncertainty relative $U_{gl}(W)_{rel}$
1 %	2.2000 g	0.00014 g	0.0063 %
25 %	55.0000 g	0.00036 g	0.00066 %
50 %	110.0000 g	0.00059 g	0.00054 %
75 %	165.0000 g	0.00082 g	0.00050 %
100 %	220.0000 g	0.0011 g	0.00048 %

Graphic realization of the relative uncertainty of measurement | process accuracy



Safety factor

10	
5	
3	
2	
1	

Displayed example

Process accuracy	1.00 %
Safety factor	3
Minimum sample weight	0.0380 g

TECHNOLOGY PROMOTION ASSOCIATION (THAILAND-JAPAN)
CORPORATE SERVICES 3: EQUIPMENT CALIBRATION AND TESTING SERVICES
534/4 PATTANAKARN ROAD SOI 18, SUANLUANG, SUANLUANG BANGKOK 10250
TEL.0-2717-3000-29 FAX.0-2719-9484

NSC-TISI-TIS17025
CALIBRATION 0008

Certificate of Calibration

Cert. No.: 24TM1618
Page : 1 of 3

Equipment :	Water Bath
Manufacturer :	Memmert
Model :	WNE29
Serial No. :	L622.0282
ID No. :	BKK_EN0439
Submitted by :	ALS Laboratory Group (Thailand) Co.,Ltd. 104 Phatthanakan 40, Phatthanakan Rd., Khwaeng Phatthanakan, Khet Suan Luang, Bangkok 10250 Thailand
Location :	Organic Preparation Lab
Received Order :	29 October 2024
Calibration Date :	29 October 2024
Ambient Temperature :	(26 ± 10) °C
Relative Humidity :	(50 ± 30) %
Calibrated by :	Man Pattanapongpaiboon

REVIEW BY ..... Sinda K. .....

APPROVED BY ..... Siriluk P. .....

NEXT CAL DATE..... 29/10/25 .....

Approved by : Kunchit

Approved Signatory

( ) Ponpan Paipim
( ) Suwit Imjai
(✓) Kunchit Promprat

Issue Date : 30 October 2024

The Uncertainties are for a confidence probability of approximately 95%

This certificate may not be reproduced other than in full, except with the prior written Approval of the head of Corporate Services 3 : Equipment Calibration and Testing Services.

Equipment : Water Bath **Cert. No.:** 24TM1618
Condition As-Received : Used Item
Reference : 2410-0782OC-4
Procedure Used :-

Calibration were conducted using in-house calibration procedure CP-OT04 Based on ASTM E715 according to direct measurement method with Data Acquisition which connected with Industrial Platinum Resistance Thermometer (IPRT).

The temperature scale used was based on ITS-90.

Condition of this result of calibration

1. Reference standard instrument:-

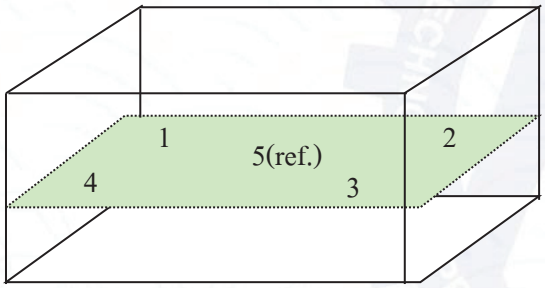
Instrument	Serial No.	Cert. No.	Traceable	Due Date
1) Data Acquisition	MY57013711	24LM115	TPA	13 Jul 2025

2. This certificate is valid only to the item calibrated on date and place of calibration.
3. This certification is traceable to the International System of Unit.

Remark : TPA : Technology Promotion Association (Thailand - Japan)

Result of Calibration :- (*) Without Adjustment
Function of UUC* : Temperature Source
Heat transfer medium used : Water

	Environmental		AC Voltage Supply
	(°C)	(%R.H.)	(Volt)
Beginning of Calibration	25	54	222
Finished of Calibration	25	57	226



Front

Position :	Ref. Std. ID No.:
1	4803988-001
2	4803988-002
3	4803988-003
4	4803988-004
5(ref.)	4803988-005

Equipment : Water Bath
Condition As-Received : Used Item
Reference : 2410-0782OC-4
Result of Calibration :- (*) Without Adjustment
Function of UUC* : Temperature Source

Cert. No.: 24TM1618

Calibration point (°C)	UUC* Setting (°C)	UUC* Reading (°C)	Average* Standard Reading (°C) Position					Uncertainty (± °C)
			1	2	3	4	5 (ref.)	
85.0	85.0	85.0	85.133	85.212	85.150	84.983	85.096	0.22

Calibration point (°C)	Uniformity (°C)	Stability (± °C)	Coverage Factor *k*
85.0	0.21	0.13	2

Average* : The average of 30 values in each position.
Uniformity : The maximum difference of measured temperatures at any sensors and the measured temperature at the reference location which are observed at the same time or at as close an observation time as possible to determine the temperature pattern or homogeneity within the chamber under steady-state conditions.
Stability : One-half of the greatest maximum difference of measured temperature at any one probe.
UUC* : Unit Under Calibration
Note : The reported uncertainty of measurement was included stability and excluded uniformity.

The reported uncertainty of measurement was based on a standard uncertainty multiplied by a coverage factor ***k***, providing a level of confidence of approximately 95 %.

-o0o-

TECHNOLOGY PROMOTION ASSOCIATION (THAILAND-JAPAN)
CORPORATE SERVICES 3: EQUIPMENT CALIBRATION AND TESTING SERVICES
534/4 PATTANAKARN ROAD SOI 18, SUANLUANG, SUANLUANG BANGKOK 10250
TEL.0-2717-3000-29 FAX.0-2719-9484

NSC-TISI-TIS17025
CALIBRATION 0008

Certificate of Calibration

Cert. No.: 25TM528
Page : 1 of 3

Equipment :	Water Bath
Manufacturer :	Memmert
Model :	WNE 29
Serial No. :	L622.0282
ID No. :	BKK_EN0439

REVIEW BY Sinda K.....
APPROVED BY Siriluk P.....
NEXT CAL DATE 09/10/26.....

Submitted by :	ALS Laboratory Group (Thailand) Co.,Ltd. 104 Phatthanakan 40, Phatthanakan Rd., Khwaeng Phatthanakan, Khet Suan Luang, Bangkok 10250 Thailand
Location :	Organic Preparation Lab
Received Order :	08 October 2025
Calibration Date :	09 October 2025
Ambient Temperature :	(26 ± 10) °C
Relative Humidity :	(50 ± 30) %
AC Line Voltage :	(220 ± 22) V

Calibrated by : Kunchit Promprat

Approved by :

Approved Signatory

( ) Chakrit Waewwanjua
( ) Ponpan Paipim
(✓) Suwit Imjai

Issue Date : 28 October 2025

The Uncertainties are for a confidence probability of approximately 95%

This certificate may not be reproduced other than in full, except with the prior written
Approval of the head of Corporate Services 3 : Equipment Calibration and Testing Services.

Equipment : Water Bath **Cert. No.:** 25TM528

Condition As-Received : Used Item **Page :** 2 of 3

Reference : 2510-0042OC-13

Procedure Used :-

Calibration were conducted using in-house calibration procedure CP-OT04 Based on ASTM E715 according to direct measurement method with Data Acquisition which connected with Industrial Platinum Resistance Thermometer (IPRT).

The temperature scale used was based on ITS-90.

Condition of this result of calibration

1. Reference standard instrument:-

Instrument	Serial No.	Cert. No.	Traceable	Due Date
1) Data Acquisition	MY58041391	25LM20	TPA	08 Feb 2026

2. This certificate is valid only to the item calibrated on date and place of calibration.
3. This measurement result is traceable to the International System of Unit maintained through :

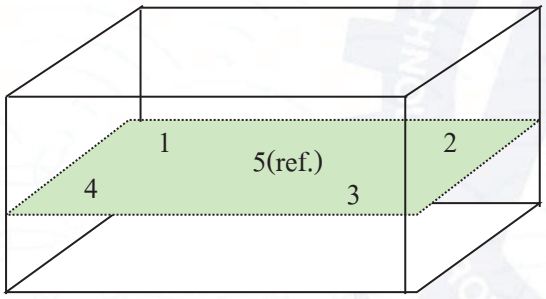
Remark : TPA : Technology Promotion Association (Thailand - Japan)

Result of Calibration :- (*) Without Adjustment

Function of UUC* : Temperature Source

Heat transfer medium used : Water

	Environmental		AC Voltage Supply
	(°C)	(%R.H.)	(Volt)
Beginning of Calibration	24	63	224
Finished of Calibration	24	58	224



Front

Position :	Ref. Std. ID No.:
1	70RC143
2	70RC144
3	70RC145
4	70RC146
5(ref.)	70RC147

Equipment : Water Bath
Condition As-Received : Used Item
Reference : 2510-0042OC-13
Result of Calibration :- (*) Without Adjustment
Function of UUC* : Temperature Source

Cert. No.: 25TM528

Calibration point (°C)	UUC* Setting (°C)	UUC* Reading (°C)	Average* Standard Reading (°C) Position					Uncertainty (± °C)
			1	2	3	4	5 (ref.)	
85.0	85.0	85.0	84.863	84.748	84.869	84.990	84.966	0.21

Calibration point (°C)	Uniformity (°C)	Stability (± °C)	Coverage Factor *k*
85.0	0.33	0.12	2

Average* : The average of 30 values in each position.
Uniformity : The maximum difference of measured temperatures at any sensors and the measured temperature at the reference location which are observed at the same time or at as close an observation time as possible to determine the temperature pattern or homogeneity within the chamber under steady-state conditions.
Stability : One-half of the greatest maximum difference of measured temperature at any one probe.
UUC* : Unit Under Calibration
Note : The reported uncertainty of measurement was included stability and excluded uniformity.

The reported uncertainty of measurement was based on a standard uncertainty multiplied by a coverage factor ***k***, providing a level of confidence of approximately 95 %.

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Metrological Center

SCI ECO Services Company Limited

33/2 Moo 3, T.Banpa, A.Kaengkhoi, Saraburi 18110

Telephone : +66 2 586 5792-4 Fax : +66 2 586 5109

Website : www.scieco.co.th E-Mail : calibrate@scg.co.th

Certificate No. T250578

Certificate of Calibration

Equipment	:	Digestion Unit
Manufacturer	:	SCP Science
Model	:	DigiPRER HT
Serial No.	:	HTC1120480658
Customer Code	:	BKK_EN0366
ID No.	:	T2635A5
Customer	:	ALS Laboratory Group (Thailand) Co.,Ltd. 104 Phatthanakan 40, Phatthanakan Rd., Khwaeng Phatthanakan, Khet Suan Luang, Bangkok 10250
Customer Location	:	Wet Chemistry Lab 1
Date of Receipt	:	2 April 2025
Calibrated By	:	Atiphong Rongrat (Technician)
Approved By	:	/ Boonchai Suriyawong (Site Calibration Manager)
Date of Issue	:	13 MAY 2025

REVIEW BY Sinda K

APPROVED BY Siriluk P

NEXT CAL. DATE 09/04/26

The uncertainties are for a confidence probability of approximately 95%.

This Certificate is issued in accordance with the conditions of accreditation granted by the Thai Laboratory Accreditation Scheme which has assessed the measurement capability of the laboratory and its traceability to recognized national standards and to the units of measurement realized at the corresponding national standard laboratory. This certificate may not be reproduced other than in full except with the prior written approval of the Metrological Center.

SCG
CEMENT-BUILDING MATERIALS

Metrological Center

SCI ECO Services Company Limited

33/2 Moo 3, T.Banpa, A.Kaengkhoi, Saraburi 18110

Telephone : +66 2 586 5792-4 Fax : +66 2 586 5109

Website : www.scieco.co.th E-Mail : calibrate@scg.co.th

Certificate No. T250578

Calibration Report

Equipment : **Digestion Unit**
Date of Calibration : **9 April 2025**
Environment : **Temperature : 23.9 - 26.3 °C**
Line Voltage : 221.8 - 225.9 V
Relative Humidity : 55 - 65 %RH

Condition of this results of calibration :

1. This equipment was calibrated by insert four standard thermocouples type S into its chamber , the other one thermocouple type T use for ambient temperature measurement . The calibration was done in according to WI-T10.
   All data show below were final values and the initial data from customer request . The temperature scale used was based on ITS - 90 .
2. Reference Standard Instrument :

Instrument	Model	Instrument No.	Certificate No.	Due Date
TC	Type S	M7-(CH1-CH4)	T242035	04 December 2025
DATA LOGGER	34970A	T121	T242035	04 December 2025

3. This certificate is traceable to :
   National Institute of Metrology (Thailand) through Metrological Center (NSC-TISI-TIS 17025 CALIBRATION 0244.)
4. Condition of calibrated item : good
   Equipment Description :
   Time Constant 2 Hour 40 Minute At 380 °C
   Fresh Air Damper ☐ Open ☐ Min ☐ Medium ☐ Max
   ☐ Close
   ☒ Not Available
5. Adjustment :
   (X) without adjustment ( ) after adjustment

Approved By. _____

Metrological Center

SCI ECO Services Company Limited

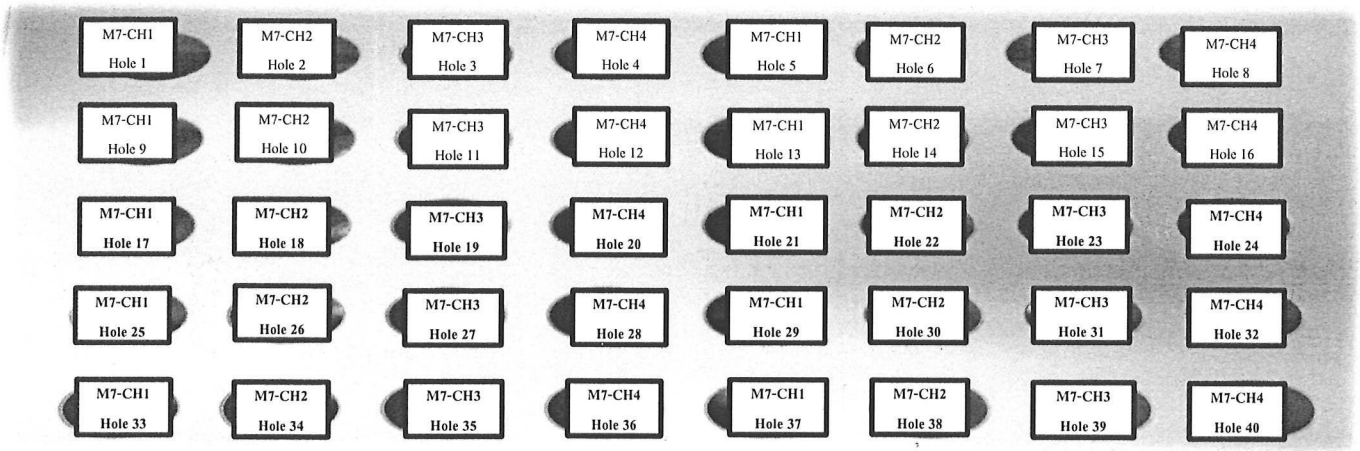
33/2 Moo 3, T.Banpa, A.Kaengkhoi, Saraburi 18110

Telephone : +66 2 586 5792-4 Fax : +66 2 586 5109

Website : www.scieco.co.th E-Mail : calibrate@scg.co.th

Certificate No. T250578

Calibration Report



FRONT

Measurement Results

Cal. Point	Setting	Reading	STD.	Position of Stardards at Block							
(^{o}C)	(^{o}C)	(^{o}C)	Reading	M7-CH1 Hole 1	M7-CH2 Hole 2	M7-CH3 Hole 3	M7-CH4 Hole 4	M7-CH1 Hole 5	M7-CH2 Hole 6	M7-CH3 Hole 7	M7-CH4 Hole 8
380.0	380.0	379.8 - 380.2	Max ^{o}C	380.0	381.0	380.9	379.6	380.3	380.9	381.3	380.1
			Min ^{o}C	379.6	380.8	380.6	379.3	379.9	380.5	380.9	379.6
			Average ^{o}C	**379.8**	**380.9**	**380.7**	**379.5**	**380.1**	**380.7**	**381.1**	**379.9**
			Stability $\pm$ ^{o}C	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2

Cal. Point	Setting	Reading	STD.	Position of Stardards at Block							
(^{o}C)	(^{o}C)	(^{o}C)	Reading	M7-CH1 Hole 9	M7-CH2 Hole 10	M7-CH3 Hole 11	M7-CH4 Hole 12	M7-CH1 Hole 13	M7-CH2 Hole 14	M7-CH3 Hole 15	M7-CH4 Hole 16
380.0	380.0	379.8 - 380.2	Max ^{o}C	378.9	378.7	379.8	381.0	382.8	381.3	381.7	380.4
			Min ^{o}C	378.3	378.2	379.3	380.7	382.1	380.5	381.3	380.0
			Average ^{o}C	**378.6**	**378.5**	**379.5**	**380.9**	**382.4**	**380.9**	**381.5**	**380.2**
			Stability $\pm$ ^{o}C	0.3	0.2	0.3	0.1	0.3	0.4	0.2	0.2

Approved By. _____

Metrological Center

SCI ECO Services Company Limited

33/2 Moo 3, T.Banpa, A.Kaengkhoi, Saraburi 18110

Telephone : +66 2 586 5792-4 Fax : +66 2 586 5109

Website : www.scieco.co.th E-Mail : calibrate@scg.co.th

Certificate No. T250578

Calibration Report

Measurement Results

Cal. Point	Setting	Reading	STD.	Position of Stardards at Block							
(^{o}C)	(^{o}C)	(^{o}C)	Reading	M7-CH1 Hole 17	M7-CH2 Hole 18	M7-CH3 Hole 19	M7-CH4 Hole 20	M7-CH1 Hole 21	M7-CH2 Hole 22	M7-CH3 Hole 23	M7-CH4 Hole 24
380.0	380.0	379.8 - 380.2	Max ^{o}C	379.3	379.2	379.1	379.5	380.8	381.1	382.5	381.3
			Min ^{o}C	379.1	379.0	378.8	379.2	380.5	380.8	382.1	381.1
			Average ^{o}C	**379.2**	**379.1**	**379.0**	**379.3**	**380.6**	**380.9**	**382.3**	**381.2**
			Stability ± ^{o}C	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.1

Cal. Point	Setting	Reading	STD.	Position of Stardards at Block							
(^{o}C)	(^{o}C)	(^{o}C)	Reading	M7-CH1 Hole 25	M7-CH2 Hole 26	M7-CH3 Hole 27	M7-CH4 Hole 28	M7-CH1 Hole 29	M7-CH2 Hole 30	M7-CH3 Hole 31	M7-CH4 Hole 32
380.0	380.0	379.8 - 380.2	Max ^{o}C	378.5	378.2	379.5	378.5	380.4	380.8	380.4	380.9
			Min ^{o}C	378.2	377.9	379.2	378.2	380.0	380.5	380.1	380.6
			Average ^{o}C	**378.3**	**378.0**	**379.4**	**378.3**	**380.2**	**380.7**	**380.2**	**380.8**
			Stability ± ^{o}C	0.2	0.2	0.1	0.2	0.2	0.1	0.2	0.2

Cal. Point	Setting	Reading	STD.	Position of Stardards at Block							
(^{o}C)	(^{o}C)	(^{o}C)	Reading	M7-CH1 Hole 33	M7-CH2 Hole 34	M7-CH3 Hole 35	M7-CH4 Hole 36	M7-CH1 Hole 37	M7-CH2 Hole 38	M7-CH3 Hole 39	M7-CH4 Hole 40
380.0	380.0	379.8 - 380.2	Max ^{o}C	379.9	380.0	379.8	379.7	380.1	380.2	379.7	379.8
			Min ^{o}C	379.6	379.6	379.5	379.3	379.8	379.9	379.4	379.5
			Average ^{o}C	**379.8**	**379.8**	**379.7**	**379.5**	**379.9**	**380.1**	**379.5**	**379.7**
			Stability ± ^{o}C	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.1

The expanded uncertainty of temperature measurement was ± 2.36 °C

The calibration result apply only the above calibrated item.

The result of test was found accurate as shown on date and place of test only.

The reported expanded uncertainty is based on a standard uncertainty multiplied by a coverage factor k=2 , providing a level of confidence of approximately 95 % .

Approved By. _____

Smartchem 600



REVIEW BY Arraya M.
APPROVED BY Sirilak P.
NEXT CAL. DATE 15/07/26

Maintenance report

Instrument S/N: 2401055

Installed at: ALS Laboratory Group (Thailand) Co., Ltd.

Address: 104 Phatthanakan 40 Alley, Phatthanakan, Suan Luang, Bangkok Thailand

Contact: Arraya Meechai Telephone: 02 760 3000

E-mail: arraya.meechai@alsglobal.com

Date of maintenance: 15-Jul-2025

Service engineer: Apirom, Samphan

Maintenance procedure

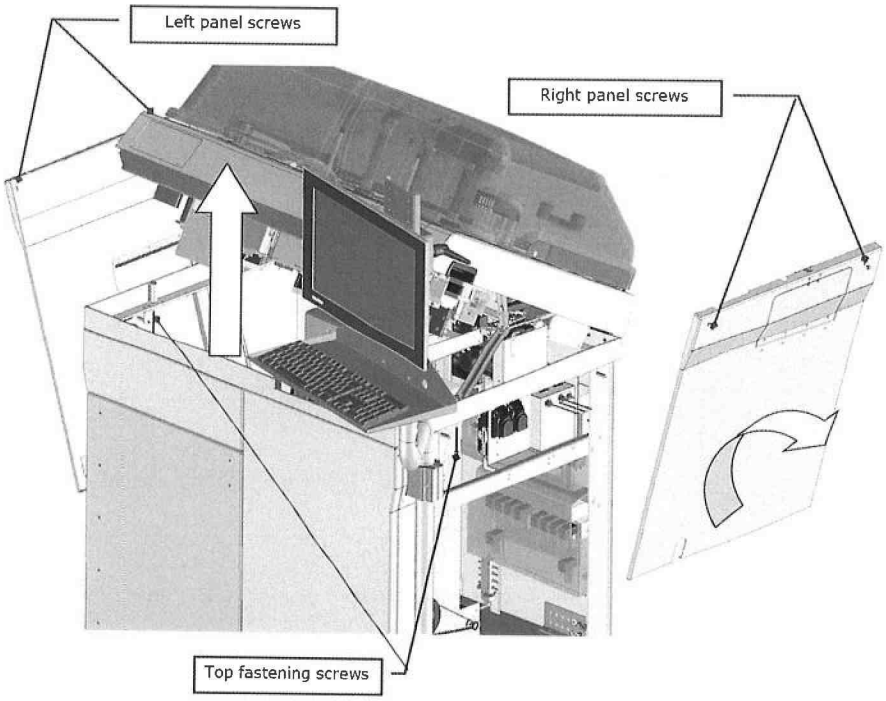
Preliminary checks		
1)	Check problems encountered by the operator while using the instrument Remarks:	☑
2)	Check of the "Event logs" ➢ Access the "Event logs" page ("Archive" → "Event logs") ➢ Filter at least the past two months in order to check if any error have occurred Remarks:	☑
3)	Verify results of WBL (to verify correct operation of the spectrometer, reagents arms and reactions plate) Remarks:	☑
4)	Check for leaks/overflows ➢ Check the coloration of the washing wells (washing wells should be white without any trace of coloration) ➢ Check the absence of dry stain under and inside the instrument (it could be evidence of old leaks/overflows) Remarks:	☑
5)	Check the correct execution of the Home procedure ➢ Access diagnostic area ("Maintenance" → "Diagnostic") ➢ Select the "Home all motors" item in order to perform the general reset of the instrument and wait until the procedure is completed ➢ Make sure that all the Home Sensors light up in green Remarks:	☑

Maintenance procedure

1)

Instrument preparation

- Remove the right side panel
- Remove the left side panel
- Unscrew the two top fastening screws and then lift up the top till the security lock falls and secure the machine in opened position
- Open the main door and gates of the Hydraulic compartment on the back right side
- Open the door of the Electronic compartment on the back left side



☑

Remarks:

2)

Washing station - emptying the drain line of the 1st cannula

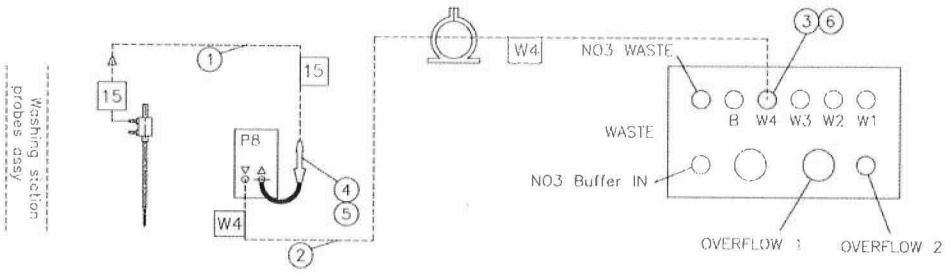
- Access diagnostic area ("Maintenance" → "Diagnostic") and open the "Washing station" page
- Activate the "Probe 1 empty..." for at least 10 seconds

☑

Remarks:

3)	Drain the hydraulic circuit of the EC module (if installed) ➢ Access diagnostic area ("Maintenance" → "Diagnostic") ➢ Perform the mechanical reset of the instrument ("Main" page → "Home all motors") ➢ Remove the cannula from the "DI water" bottle Access the "EC" page and run 10 times the "Purge" feature	☐
	Remarks: Don't installed.	
4)	Drain the hydraulic circuit of the NO3 module (if installed) ➢ Access diagnostic area ("Maintenance" → "Diagnostic") ➢ Perform the mechanical reset of the instrument ("Main" page → "Home all motors") ➢ Remove the cannula from the "Imidazole" bottle ➢ Access the "NO3" page and run 2 times the "Liquids prime" feature	☐
	Remarks: Customer stop to use NO3 module because the Cadmium Coild was defective.	
5)	Perform all updates ➢ Windows update ➢ Software update	☑
	Remarks: For Windows update: We will cooperate with IT of ALS to update Windows For Software update: We will make appointment with ALS to update Software when we have new version of Software.	
6)	Instrument cleaning ➢ Clean the fan of the power supply (using a vacuum cleaner if possible) ➢ Internal and external cleaning of the instrument to eliminate traces of old liquid leaks ➢ Remove all tubings from the inlet tanks and wash the inlet tanks with 5% sodium hypochlorite or 5% HCl ➢ Manually check the correct dispensation of each cannula of the washing station using a syringe with distilled water **NOTE:** do not inject air in order to prevent any kind of damage of the power supply due to injection of the dust inside it	☑
	Remarks:	

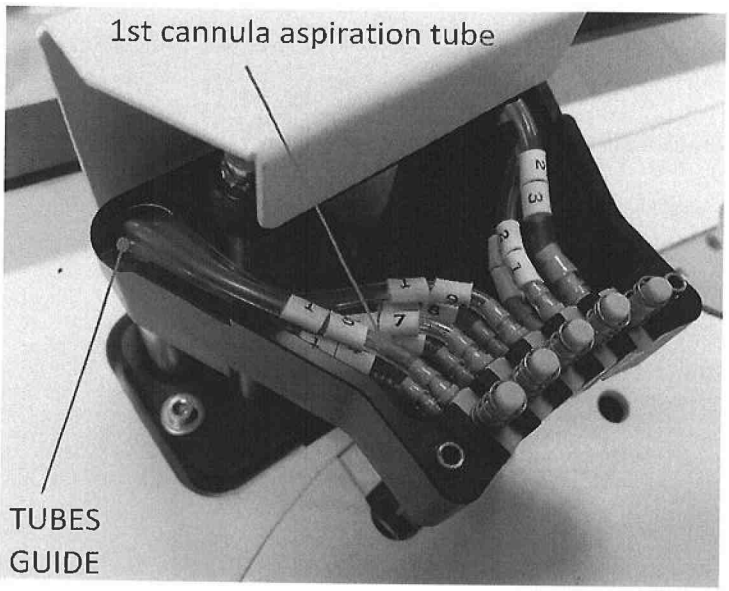
Washing station – tube replacement on 1st cannula



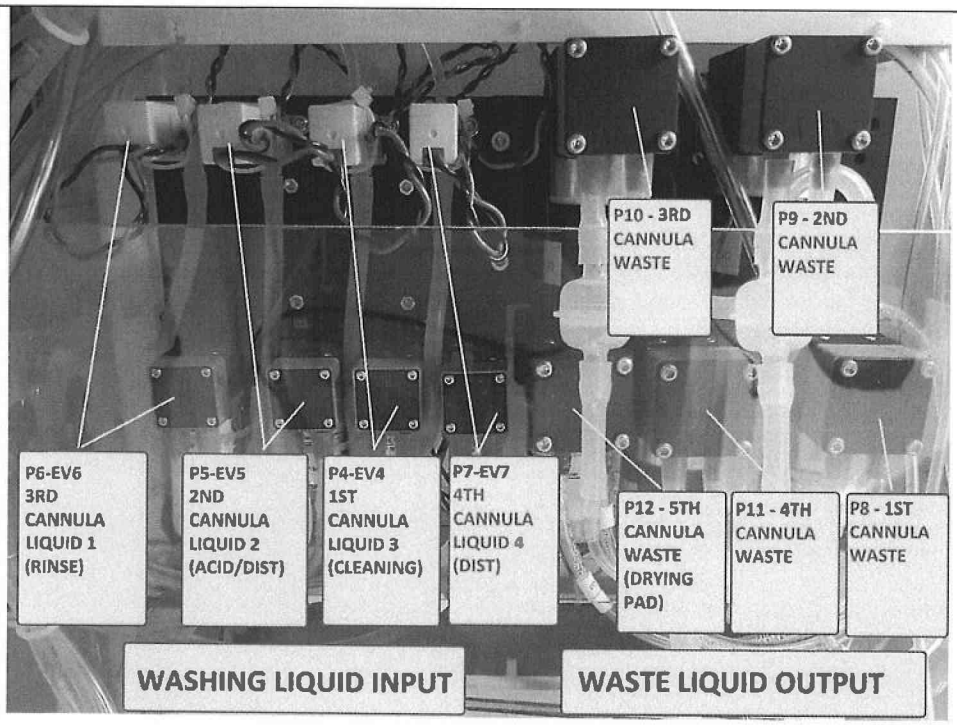
WARNING! BIOHAZARD RISK WHEN REMOVING TUBES. USE APPROPRIATE PROTECTIONS

7)

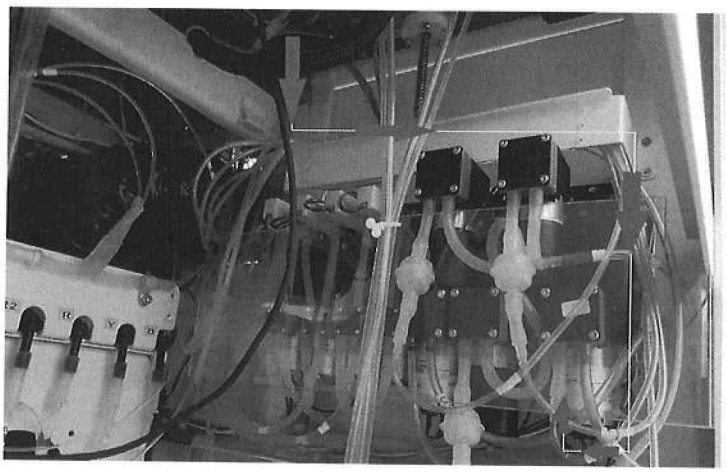
- Locate the 1st washing station cannula loading tube "ID 15". Unplug it from the 1st cannula and slide it down through the tubes guide



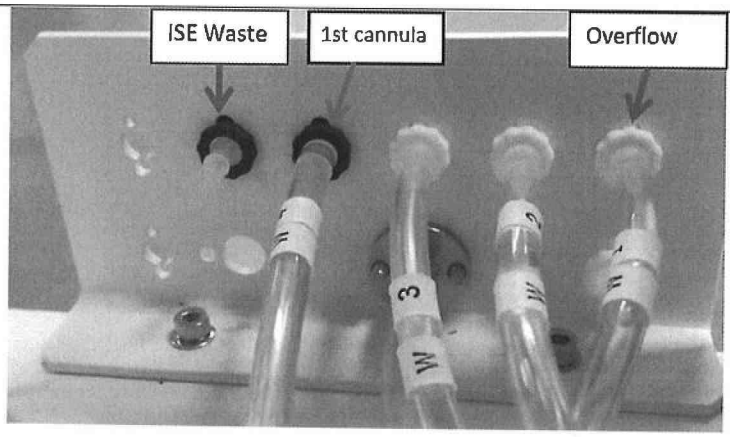
- Unplug the tube "ID 15" from "uP8" in washing station pump compartment



- install the new tube "ID 15" respecting the routing shown in the figure



- Replace tube "W4" from pump "uP8" to the waste tubes panel

		
	Remarks:	
8)	Filters replacement on drain lines WARNING! BIOHAZARD RISK WHEN REMOVING TUBES. USE APPROPRIATE PROTECTIONS	☑
9)	Maintenance of inlet tanks ➢ Wash all inlet tanks at latest 3 times with DI water ➢ Fill all inlet tanks with fresh solutions ➢ Wash the "DI water" bottle and fill it with fresh "DI water" (if the EC module is installed)	☑
	Remarks:	
10)	Switch on instrument and software	☑
11)	Workplans backup (delete archived workplans in order to lighten the database)	☑
12)	Mechanical checking and adjustments ➢ Alignment between reactions plate and photometer ➢ Alignment between washing station and reactions plate ➢ Home position of all sampling arms ➢ Alignment of Samples arm on sample carousels and reactions plate ➢ Alignment of Reagents arm on reagents plate and reactions plate ➢ Alignment of Mixer scoops on reactions plate	☑

	Remarks: The needle of R1 Reagent Sampling prove is bent then we have adjusted the R1 Reagent Sampling Arm for the needle postion is in center of the Washing well.	
13)	Functional checks of the drain lines ➢ Washing well of Samples arm • Manually fill the washing well • Access diagnostic area ("Maintenance" → "Diagnostic") and open the "Samples arm (S)" page • Activate the "Washing well empty pump (P20)" and verify that washing well has been emptied	☑
	➢ Washing well Reagents arm R1 • Manually fill the washing well • Access diagnostic area ("Maintenance" → "Diagnostic") and open the "Reagents arm 1 (R1)" page • Activate the "Washing well empty pump (P21)" and verify that washing well is emptied	☑
	➢ Washing well Reagents arm R2 • Manually fill washing the well • Access diagnostic area ("Maintenance" → "Diagnostic") and open the "Reagents arm 2 (R2)" page • Activate the "Washing well empty pump (P22)" and verify that washing well is emptied	☑
	➢ Washing wells Mixer • Manually fill both washing wells • Access diagnostic area ("Maintenance" → "Diagnostic") and open the "Mixer (MX)" page • Activate the "Scoop 1 washing well empty pump (P19)" and verify that washing well is emptied • Activate the "Scoop 2 washing well empty pump (P18)" and verify that washing well is emptied	☑

	➢ Washing station – cannulas • Access diagnostic area ("Maintenance" → "Diagnostic") • Perform the mechanical reset of the instrument ("Main" page → "Home all motors") • Manually fill the 4 cuvettes located below the cannulas • Open the "Washing station (WS)" page and activate the "Probe 1 empty...", "Probe 2 empty...", "Probe 3 empty..." and "Probe 4 empty..." • Set "Movement length (mm)" to 10 mm and click on "Move down" till the cannulas will be near to the bottom of cuvettes and check that the cuvettes have been emptied • Disable all empty pumps and click on "Reset" to perform the mechanical reset of the washing station	☑
	➢ EC module (if installed) • Access diagnostic area ("Maintenance" → "Diagnostic") • Manually fill the washing well of the EC module • Open the "EC" page; click on "Maintenance" button and check that washing well have been emptied	☐
	➢ NO3 module (if installed) • Access diagnostic area ("Maintenance" → "Diagnostic") • Manually fill the washing well of the NO3 module • Open the "NO3" page; click on "Activate pump P2" button and check that washing well have been emptied	
	Remarks: EC module don't installed. Customer stop to use NO3 module because the Cadmium Coild was defective.	
14)	Prime the hydraulic circuit of the instrument ➢ Insert tubings inside relative inlet tanks ➢ Perform 2 "Prime liquids" and 1 "Wash all cuvettes"	☑
	Remarks:	
15)	Washing station - hydraulic operating check ➢ Access "Diagnostic" area and click on "Home all motor" ➢ Open the "Washing station (WS)" page and perform the "Liquid level diagnosis"	☑
	Remarks:	

16)	Samples arm - hydraulic operating check ➢ Access "Diagnostic" area and click on "Home all motor" ➢ Open the "Samples arm" page and perform at least 2 times the "Hydraulic check" Remarks:	☑
17)	Reagent arm 1 - hydraulic operating check ➢ Access "Diagnostic" area and click on "Home all motor" ➢ Open the " Reagent arm 1" page and perform at least 2 times the "Hydraulic check" Remarks:	☑
18)	Reagent arm 2 - hydraulic operating check ➢ Access "Diagnostic" area and click on "Home all motor" ➢ Open the " Reagent arm 2" page and perform at least 2 times the "Hydraulic check" Remarks:	☑
19)	Wash and Prime the hydraulic circuit of the instrument ➢ Insert the cannulas inside a backer with washing solution (5% HCl or sodium hypochlorite 5%) ➢ Perform 2 "Prime liquids" checking that all tubes are filled ➢ Wait for fifteen minutes. ➢ Clean and dry the four cannulas and then insert them into a bottle containing distilled water ➢ Perform 4 "prime liquids" to remove any trace of washing solution ➢ Clean and dry the four cannulas and then insert them inside the relative tanks ➢ Perform 2 "Prime liquids" in order to fill each line with the working solutions Remarks:	☑

20)	Prime the hydraulic circuit of the EC module (if installed) ➢ Insert the cannulas inside the DI tank ➢ Perform at least 3 "Purge" Remarks: Don't installed	☐
21)	Prime the hydraulic circuit of the NO3 module (if installed) ➢ Insert the cannula into the "Imidazole" bottle ➢ Perform at least 2 "Liquids Prime" Remarks: Customer stop to use NO3 module because the Cadmium Coild was defective.	☐
22)	Cuvettes replacement and reset of WBL results ➢ Access diagnostic area ("Maintenance" → "Diagnostic") ➢ Click on "Disengage all motor" in order to be able to move the reactions plate freely by hand ➢ Replace all cuvettes ➢ Access the WBL page ("Checks" → "Water blank level") ➢ Click in the center of the reactions plate picture on the screen and select the "Replace cuvettes" feature to reset WBL results Remarks:	☑
23)	Drying pad replacement Customer have replaced the Drying pad before.	☑

24)	Photometer checking and adjustment ➢ Replacement of the lamp ➢ Checking and adjustment of Lamp voltage (5,8 V) • Voltage: ➢ Checking and adjustment of Offset (750 counts) and Gain (7.500.000 counts) for each wavelength • Access "Diagnostic" area and click on "Home all motor" • Manually fill cuvette #1, which is in front of the spectrometer, with at least 300 µL of Rinse solution • Open the "Spectrometer" page and click on "Lamp on" in order to switch off the lamp • Setup the Offset at 750 counts for each wavelength • Click on "Lamp on" in order to switch on the lamp and wait the end of the lamp warm-up time "Warm-up (remaining time)" • Setup the Gain at 7.500.000 counts for each wavelength	☑
	Remarks: Voltage: 5.8 Volt	
25)	Temperature ➢ Reaction plate: 36.7 C ➢ Reagents plate: 8.4 C ➢ Sampling arm: 22.9 C ➢ Room: 23.5 C	☑
	Remarks:	
1)	Run calibration and quality controls to confirm correct performance Method name: ☑ Pass ☐ Fail ☑ Printout enclosed Method name: ☑ Pass ☐ Fail ☑ Printout enclosed Method name: ☑ Pass ☐ Fail ☑ Printout enclosed	☑
	Remarks: The calibration and quality controls done by the user which have that document.	

Maintenance completed successfully: ☑ Yes ☐ No

Service engineer signature: _____

Metrology

SCI ECO Services Company Limited

33/2 Moo 3, T.Banpa, A.Kaengkhoi, Saraburi 18110, Thailand.

Saraburi Tel : +66 3627 3096 Fax : +66 3627 3100

Bangkok Tel : +668 9205 6851 , +669 8247 2360

Website : www.scieco.co.th E-Mail : calibrate@scg.com

NSC-TISI-TIS 17025
CALIBRATION 0244

Certificate of Calibration

Equipment	:	**Chamber (Oven)**
Manufacturer	:	**Memmert**
Model	:	**UF 110**
Serial No.	:	**B423.1549**
Customer Code	:	**BKK_EN0425**
ID No.	:	**T4671A5**
Customer	:	**ALS Laboratory Group (Thailand) Co.,Ltd.**
		104 Phatthanakan 40, Phatthanakan Rd., Khwaeng Phatthanaka
		Khet Suan Luang, Bangkok 10250
Customer Location	:	**Oven Room**
Date of Receipt	:	**22 October 2024**
Calibrated By	:	**Boonchai Suriyawong (Site Calibration Manager)**
Approved By	:	_____ **/ Sujjar Naknakred (Site Calibration Manager)**
Date of Issue	:	11 NOV 2024

REVIEW BY Sinda K.
APPROVED BY Siriluk P.
NEXT CAL. DATE 29/10/25

The uncertainties are for a confidence probability of approximately 95%.

This Certificate is issued in accordance with the conditions of accreditation granted by the Thai Laboratory Accreditation Scheme which has assessed the measurement capability of the laboratory and its traceability to recognized national standards and to the units of measurement realized at the corresponding national standard laboratory. This certificate may not be reproduced other than in full except with the prior written approval of the Metrology.

Certificate No. T241770

Calibration Report

Equipment : **Chamber (Oven)**
Date of Calibration : **29 October 2024**
Environment : **Temperature : 22.4-27.7 °C**
Line Voltage : 221.7-225.9 V
Relative Humidity : 55 - 65 %RH

Condition of this results of calibration :

1. This equipment was calibrated by insert nine resistance thermometer detectors into its chamber , the other one resistance thermometer detector use for ambient temperature measurement . The calibration was done in according to WI-T20 (based on ASTM E145-94 (Reapproved 2001) and AS2853-1986).
   All data show below were final values and the initial data from customer request . The temperature scale used was based on ITS - 90 .
2. Reference Standard Instrument :

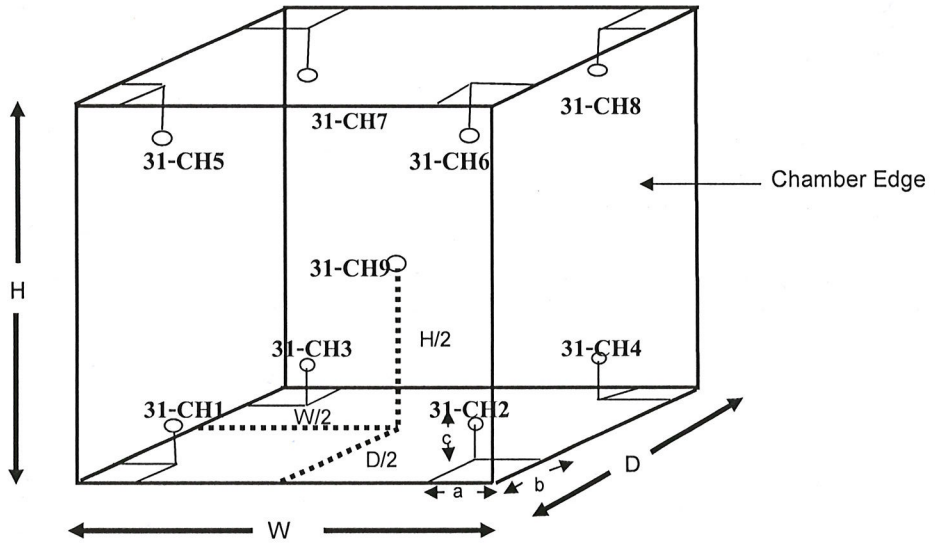
Instrument	Model	Instrument No.	Certificate No.	Due Date
RTD	100 ohm	31-(CH1-10)	T240399	16 March 2025
DATA LOGGER	34970A	T193	T240399	16 March 2025

3. This certificate is traceable to :
   National Institute of Metrology (Thailand) through Metrological Center (NSC-TISI-TIS 17025 CALIBRATION 0244.)
4. Condition of calibrated item : good
   Equipment Description :
   Time Constant 1 Hour 35 Minute At 104 °C
   Fresh Air Damper ☐ Open ☒ Min ☐ Medium ☐ Max
   ☐ Close
   ☐ Not Available
5. Adjustment :
   (X) without adjustment ( ) after adjustment

Approved By._____

Certificate No. T241770

Calibration Report



Remark :

Internal Dimensions of Chamber : W (Width) = 56 cm. , H(Height)=55 cm. and D(Depth)=41 cm.
Size of Installed Standard sensor number31-CH1to number31-CH8 : a = 5 cm. ,b = 5 cm. and c = 5 cm.
Size of Installed Standard sensor number31-CH9 : W/2=56 cm./2 , H/2=55 cm./2 and D/2=41 cm./2

Measurement Results

	Average Standard Reading at each position (°C)								
Calibration Point	**31-CH1**	**31-CH2**	**31-CH3**	**31-CH4**	**31-CH5**	**31-CH6**	**31-CH7**	**31-CH8**	**31-CH9**
104	104.19	104.50	103.83	104.26	104.02	104.34	103.76	104.42	103.96
180	180.39	180.40	179.84	180.15	179.27	180.23	180.36	180.68	180.73

Chamber (Oven)			Temperature Distribution				
Setting (°C)	Reading (°C)		Average (°C)	Stability (±°C)	Uniformity (°C)	Uncertainty (±°C)	Coverage Factor *k*
	Min , Max	Average					
104.0	103.9 , 104	104.0	104.14	0.14	0.60	0.42	2.00
180.0	179.9 , 180	180.0	180.23	0.27	0.76	0.63	2.00

*** The quoted uncertainty exclude "uniformity"**

The calibration result apply only the above calibrated item.

The result of test was found accurate as shown on date and place of test only.

The reported expanded uncertainty is based on a standard uncertainty multiplied by a coverage factor *k* which for a t-distribution, providing a level of confidence of approximately 95 % .

End of Certificate

Approved By._____

SCG

Metrology Center

SCI ECO Services Company Limited

51 Moo 8, Tubkwang, Kaeng Khoi, Saraburi, Thailand 18260

Bangkok Tel : +668 9205 6851 , +669 81924 0059

Saraburi Tel : +669 8247 2360

Website : www.scieco.co.th E-Mail : calibrate@scg.co.th

NSC-TISI-TIS 17025
CALIBRATION 0244

Certificate No. T251785

Certificate of Calibration

Equipment	:	**Chamber (Oven)**
Manufacturer	:	**Memmert**
Model	:	**UF110**
Serial No.	:	**B423.1549**
Customer Code	:	**BKK_EN0425**
ID No.	:	**T4671A5**
Customer	:	**ALS Laboratory Group (Thailand) Co.,Ltd.** **104 Phatthanakan 40, Phatthanakan Rd., Khwaeng Phatthanakan,** **Khet Suan Luang, Bangkok 10250**
Customer Location	:	**Oven Room**
Date of Receipt	:	**1 October 2025**
Calibrated By	:	**Sujjar Naknakred (Site Calibration Manager)**
Approved By	:	**Boonchai Suriyawong (Site Calibration Manager)**
Date of Issue	:	10 OCT 2025

REVIEW BY Jinda K.
APPROVED BY Siriluk P.
NEXT CAL. DATE 06/10/26

The uncertainties are for a confidence probability of approximately 95%.

This Certificate is issued in accordance with the conditions of accreditation granted by the Thai Laboratory Accreditation Scheme which has assessed the measurement capability of the laboratory and its traceability to recognized national standards and to the units of measurement realized at the corresponding national standard laboratory. This certificate may not be reproduced other than in full except with the prior written approval of the Metrological Center.

SCG

Metrology Center
SCI ECO Services Company Limited
51 Moo 8, Tubkwang, Kaeng Khoi, Saraburi, Thailand 18260

NSC-TISI-TIS 17025
CALIBRATION 0244

Calibration Report

Equipment : **Chamber (Oven)**
Date of Calibration : **6 October 2025**
Environment : **Temperature : 24.4-25.8 °C**
Line Voltage : 220.5-225.2 V
Relative Humidity : 55 - 65 %RH

Condition of this results of calibration :

1. This equipment was calibrated by insert nine resistance thermometer detectors into its chamber , the other one resistance thermometer detector use for ambient temperature measurement . The calibration was done in according to WI-T20 (based on ASTM E145-94 (Reapproved 2019) and AS2853-1986).
   All data show below were final values and the initial data from customer request . The temperature scale used was based on ITS - 90 .
2. Reference Standard Instrument :

Instrument	Model	Instrument No.	Certificate No.	Due Date
RTD	100 ohm	23-(CH1-10)	T250314	6 April 2026
DATA LOGGER	34970A	T195	T250314	6 April 2026

3. This certificate is traceable to :
   National Institute of Metrology (Thailand) through Metrological Center (NSC-TISI-TIS 17025 CALIBRATION 0244.
4. Condition of calibrated item : good
   Equipment Description :
   Time Constant 2 Hour 14 Minute At 104 °C
   Fresh Air Damper [X] Open [X] Min [ ] Medium [ ] Max
   [ ] Close
   [ ] Not Available
5. Adjustment :
   ( ) without adjustment (X) after adjustment

Approved By.

SCG

Metrology Center

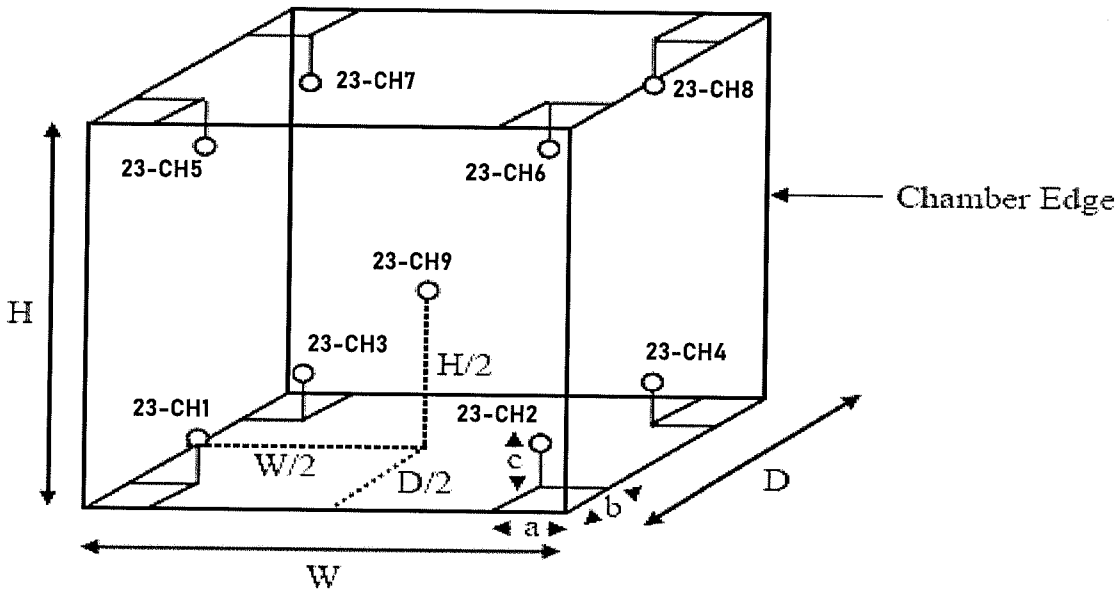
SCI ECO Services Company Limited

51 Moo 8, Tubkwang, Kaeng Khoi, Saraburi, Thailand 18260

NSC-TISI-TIS 17025
CALIBRATION 0244

Certificate No. T251785

Calibration Report



Remark : Internal Dimensions of Chamber : W (Width) = 56 cm. , H (Height) = 48 cm. and D (Depth) = 40 cm.
Size of Installed Standard sensor number 23-CH1 to number 23-CH8 : a = 5 cm. ,b = 5 cm. and c = 5 cm.
Size of Installed Standard sensor number 23-CH9 : W/2 = 56 cm./2 , H/2 = 48 cm./2 and D/2 = 40cm./2

Measurement Results

	Average Standard Reading at each position (°C)								
Calibration Point	23-CH1	23-CH2	23-CH3	23-CH4	23-CH5	23-CH6	23-CH7	23-CH8	23-CH9
104	104.13	103.54	103.92	104.37	104.40	104.51	104.18	103.86	103.80
180	180.05	179.82	179.64	179.52	181.20	180.29	180.19	179.35	179.89

Chamber (Oven)			Temperature Distribution				
Setting °C	Reading (°C)		Average (°C)	Stability (± °C)	Uniformity (°C)	Uncertainty (± °C)	Coverage Factor *k*
	Min , Max	Average					
104.0	-	104.0	104.08	0.28	0.87	0.45	2.00
180.0	180.0 , 180.1	180.0	179.99	0.37	1.49	0.61	2.00

* The quoted uncertainty exclude "uniformity"
The calibration result apply only the above calibrated item.
The result of test was found accurate as shown on date and place of test only.
The reported expanded uncertainty is based on a standard uncertainty multiplied by a coverage factor k which for a t-distribution, providing a level of confidence of approximately 95 % .

End of Certificate.

Approved By. _____

TECHNOLOGY PROMOTION ASSOCIATION (THAILAND-JAPAN)

CORPORATE SERVICES 3 : EQUIPMENT CALIBRATION AND TESTING SERVICES

534/4 PATTANAKARN ROAD SOI 18, SUANLUANG, SUANLUANG BANGKOK 10250

TEL. 0-2717-3000 FAX. 0-2719-9484

Certificate of Testing

Equipment :	DO Meter
Manufacturer :	YSI
Model :	5000-230V
Serial No. :	09J101147
ID No. :	BKK_EN0017
Received Date :	19 May 2025
Test Date :	20 May 2025
Reference :	2505-0593DSC-1
Submitted by :	ALS Laboratory Group (Thailand) Co.,Ltd. 104 Phatthanakan 40, Phatthanakan Rd., Khwaeng Phatthanakan, Khet Suan Luang, Bangkok 10250 Thailand
Laboratory Condition :	Temperature (25 ± 5) °C Humidity (50 ± 20) %
Test Procedure :	In - house method : CP-CH9 by Comparison Technique with Azide Modification Method
Tested by :	Walalak Sirithean
Approved by :	Approved Signatory

REVIEW BY Sinda K.

APPROVED BY Siriluk P.

NEXT CAL DATE 20/11/26

( ) Chakrit Waewwanjua
( ) Ponpan Paipim
(✓) Saithip Meangmai

Issue Date : 20 May 2025

Condition of this result of calibration

1. Reference Standard Instruments :
   This measurement result is traceable to the International System of Unit through the reference standards laboratory of Industrial Calibration Center, Technology Promotion Association (Thailand-Japan).

Instruments	Serial No.	ID No.	Certificate No.	Due Date
1. Burette	-	130BU10	25CG1126	18 Mar 2027
2. Balance	14233821	110RC001	24MM131	04 July 2025

2. Standard Material :-

Material	Manufacturer	Lot.No.	Assay
Sodium Thiosulfate 5-Hydrate AR	KEMAUS	2203162447	99.6%

Result : **Dissolved Oxygen Meter Adjustment With Air 100 %**
Dissolved Oxygen Probe No.: 16K100498

Titration Method (Azide Modification Method) (mg/L)	**DO Meter Reading** (mg/L)	**Standard Deviation** (mg/L)
8.20	8.21	0.0090

This report was certified only for the instrument we tested.It is allowable to use for study Intend to use for advertising and referral purpose is prohibited.This report may not be reproduced other in full, without written approval of the laboratory

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TECHNOLOGY PROMOTION ASSOCIATION (THAILAND-JAPAN)
CORPORATE SERVICES 3: EQUIPMENT CALIBRATION AND TESTING SERVICES
534/4 PATTANAKARN ROAD SOI 18, SUANLUANG, SUANLUANG BANGKOK 10250
TEL.0-2717-3000-29 FAX.0-2719-9484

NSC-TISI-TIS17025
CALIBRATION 0008

Certificate of Calibration

Cert. No.: 25LM83

Equipment :	DO Meter with Sensor
Manufacturer :	YSI
Model :	5000-230V
Serial No. :	09J101147
ID No. :	BKK_EN0017
Submitted by :	ALS Laboratory Group (Thailand) Co.,Ltd. 104 Phatthanakan 40, Phatthanakan Rd., Khwaeng Phatthanakan, Khet Suan Luang, Bangkok 10250 Thailand
Location :	TPA On Site Calibration Laboratory
Received Order :	19 May 2025
Calibrated Date :	20 May 2025
Ambient Temperature :	(26 ± 10) °C
Relative Humidity :	(50 ± 30) %
AC Line Voltage :	(220 ± 22) V

Calibrated by : Warakorn Lerngagtrakul

Approved by : Kunchit

Approved Signatory

( ) Chakrit Waewwanjua
( ) Suwit Imjai
(✓) Kunchit Promprat

Issue Date : 26 May 2025

The Uncertainties are for a confidence probability of approximately 95%

This certificate may not be reproduced other than in full, except with the prior written Approval of the head of Corporate Services 3 : Equipment Calibration and Testing Services.

Equipment : DO Meter with Sensor **Cert. No.:** 25LM83

Condition As-Received : Used Item

Reference : 2505-0593DSC-2

Procedure Used :-

Calibration were conducted using in-house calibration procedure CP-OT01 according to comparison with Industrial Platinum Resistance Thermometer (IPRT) into Temperature Bath.

The temperature scale used was based on ITS-90.

Condition of this result of calibration

1. Reference standard instrument:-

Instrument	Serial No.	Cert. No.	Traceable	Due Date
1) Digital Thermometer	2188080	24I1022	TPA	17 Sep 2025

2. This certificate is valid only to the item calibrated on date and place of calibration.
3. This certification is traceable to the International System of Unit.

Remark : TPA : Technology Promotion Association (Thailand - Japan)

Result of Calibration :- (*) Without Adjustment

Function : Temperature measurement.

This instrument was connected with temperature sensor, S/N.: 16K100498

Calibration Point (°C)	Immersion Depth (mm)	Standard Temperature (°C)	UUC* Reading (°C)	Error (°C)	Uncertainty (± °C)	Coverage Factor *k*
20.00	60	20.003	19.92	-0.083	0.15	2.00

UUC* : Unit Under Calibration

The reported uncertainty of measurement was based on a standard uncertainty multiplied by a coverage factor ***k***, providing a level of confidence of approximately 95 %.

-o0o-

SCG

Metrology

SCI ECO Services Company Limited

33/2 Moo 3, T.Banpa, A.Kaengkhoi, Saraburi 18110, Thailand.

Saraburi Tel : +66 3627 3096 Fax : +66 3627 3100

Bangkok Tel : +668 9205 6851 , +669 8247 2360

Website : www.scieco.co.th E-Mail : calibrate@scg.com

NSC-TISI-TIS 17025
CALIBRATION 0244

Certificate of Calibration

Equipment	:	Chamber (Incubator)
Manufacturer	:	Memmert
Model	:	ICP 750
Serial No.	:	F818.0075
Customer Code	:	BKK_EN0305
ID No.	:	T9571A4
Customer	:	ALS Laboratory Group (Thailand) Co.,Ltd. 104 Phatthanakan 40, Phatthanakan Rd., Khwaeng Phatthanakan, Khet Suan Luang, Bangkok 10250
Customer Location	:	Wet Chemistry Lab 2
Date of Receipt	:	26 February 2025
Calibrated By	:	Atiphong Rongrat (Technician)
Approved By	:	_____ / Boonchai Suriyawong (Site Calibration Manager)
Date of Issue	:	17 MAR 2025

REVIEW BY Sinda K.
APPROVED BY Siriluk P.
NEXT CAL. DATE 05/03/26

The uncertainties are for a confidence probability of approximately 95%.

This Certificate is issued in accordance with the conditions of accreditation granted by the Thai Laboratory Accreditation Scheme which has assessed the measurement capability of the laboratory and its traceability to recognized national standards and to the units of measurement realized at the corresponding national standard laboratory. This certificate may not be reproduced other than in full except with the prior written approval of the Metrology.

Certificate No. T250357

Calibration Report

Equipment : **Chamber (Incubator)**

Date of Calibration : **5 March 2025**

Environment : **Temperature : 23.4-24.9 °C**

Line Voltage : 221.4-224.7 V

Relative Humidity : 55 - 65 %RH

Condition of this results of calibration :

1. This equipment was calibrated by insert 12 resistance thermometer detectors into its chamber , the other one resistance thermometer detector use for ambient temperature measurement . The calibration was done in according to WI-T20 (based on ASTM E145-94 (Reapproved 2001) and AS2853-1986).
   All data show below were final values and the initial data from customer request . The temperature scale used was based on ITS - 90 .
2. Reference Standard Instrument :

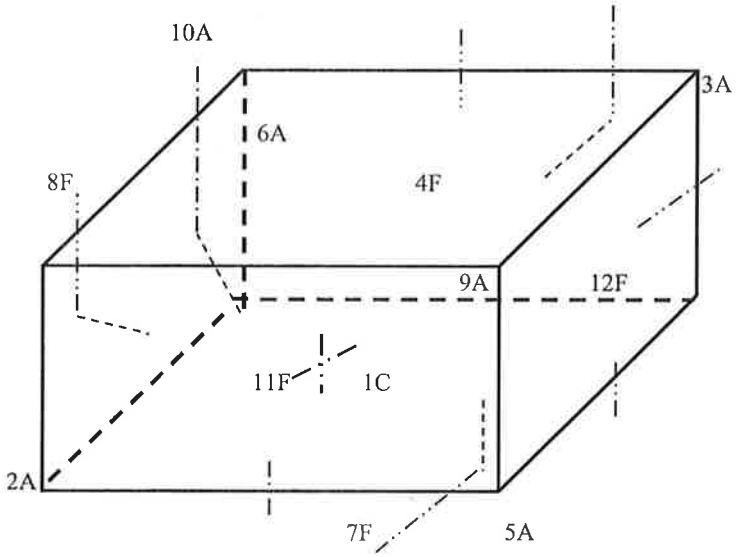
Instrument	Model	Instrument No.	Certificate No.	Due Date
RTD	100 ohm	31-(CH1-10)	T240399	16 March 2025
RTD	100 ohm	32-(CH1-10)	T240399	16 March 2025
DATA LOGGER	34970A	T193	T240399	16 March 2025

3. This certificate is traceable to :
   National Institute of Metrology (Thailand) through Metrological Center (NSC-TISI-TIS 17025 CALIBRATION 0244.)
4. Condition of calibrated item : good
   Equipment Description :
   Time Constant 2 Hour - Minute At 20 °C
   Fresh Air Damper ☐ Open ☐ Min ☐ Medium ☐ Max
   ☐ Close
   ☒ Not Available
5. Adjustment :
   (X) without adjustment ( ) after adjustment

Approved By. _____

Certificate No. T250357

Calibration Report



C = Centre , F = Centre of Face , A = Corner , E = Centre of Edge

1C	=	31-CH1
2A	=	31-CH2
3A	=	31-CH3
4F	=	31-CH4
5A	=	31-CH5
6A	=	31-CH6
7F	=	31-CH7
8F	=	31-CH8
9A	=	31-CH9
10A	=	31-CH10
11F	=	32-CH1
12F	=	32-CH2

Approved By._____

Certificate No T250357

Calibration Report

Measurement Results :

	Average Standard Reading at each position (°C)											
Calibration Point	**31-CH1**	**31-CH2**	**31-CH3**	**31-CH4**	**31-CH5**	**31-CH6**	**31-CH7**	**31-CH8**	**31-CH9**	**31-CH10**	**32-CH1**	**32-CH2**
20	19.89	20.34	19.88	20.16	19.86	19.46	19.67	19.91	19.97	19.92	19.94	19.88

	Average Standard Reading at each position (°C)											
Calibration Point	**31-CH1**	**31-CH2**	**31-CH3**	**31-CH4**	**31-CH5**	**31-CH6**	**31-CH7**	**31-CH8**	**31-CH9**	**31-CH10**	**32-CH1**	**32-CH2**
25	24.92	25.30	25.11	25.12	25.28	24.91	25.14	24.84	25.24	25.02	25.25	25.21

Chamber (Incubator)			**Temperature Distribution**				
Setting (°C)	**Reading (°C)**		**Average (°C)**	**Stability (±°C)**	**Uniformity (°C)**	**Uncertainty (±°C)**	**Coverage Factor *k***
	Min , Max	**Average**					
20.0	-	**20.0**	19.91	0.10	0.41	0.38	2.02
25.0	-	**25.0**	25.11	0.10	0.39	0.38	2.02

The calibration result apply only the above calibrated item.

The result of test was found accurate as shown on date and place of test only.

The reported expanded uncertainty is based on a standard uncertainty multiplied by a coverage factor *k* which for a t-distribution, providing a level of confidence of approximately 95 % .

Approved By. _____

REVIEW BY Autcharawan S.

APPROVED BY Tanyatorn M.

NEXT CAL. DATE 24/06/26

ARCHEMICA

Certificate of Calibration

ICS-2100: Anion (ID#659)

This certificate is to verify that instrument below are calibrated

by Archemica Lab Co., Ltd.

ICS-2100 S/N: 11080010

AS-HV S/N: 5450A36659

For

ALS Laboratory Group (Thailand) Co., Ltd.

ARCHEMICA LAB
บริษัท อาร์เคมีก้า แลบ จำกัด
ARCHEMICA LAB CO.,LTD

Operator Signature: _____ **Date: June 17-24, 2025**

(Mr.Soranat Thongnop)

Application Chemist

HACH
Be Right™

REVIEW BY Chayathorn R.
APPROVED BY Monchom P.
NEXT CAL. DATE 01/04/26

Ref. Job number ; #5971

Test Report

Customers	:	ALS Laboratory Group (Thailand) Co., Ltd.			
Equipment	:	Colorimeter	Manufacturer	:	HACH
Controller Model	:	☑ DR300 ☐ Pocket II	ID No.	:	BKK_LG0069
Controller Serial No.	:	23020B001802	Sensor Serial No.	:	-
Date of test	:	01/04/2025	Period	:	1 Year
Environment temperature	:	25.1 °C	Humidity	:	60.8 %RH

Results

Instrument Checked

Item	Characteristic	Before	After	Remark
1	Visual Inspect	☑ Pass ☐ Fail	☑ Pass ☐ Fail	
2	Power Supply (4.5 – 6.0 VDC)	5.7 VDC	5.7 VDC	
3	Display Check	☑ Pass ☐ Fail	☑ Pass ☐ Fail	
4	Keyboard Check	☑ Pass ☐ Fail	☑ Pass ☐ Fail	
5	Function System Program	☑ Pass ☐ Fail	☑ Pass ☐ Fail	

Warning and Error Checked

Item	Event	Before	After
6	Error list	☑ None ☐ Appear_____	☑ None ☐ Appear_____

Check with Standard

Item	Characteristic	Before	After	Remark
	DPD-CHLORINE-LR			
7	Blank (0.0 mg/l)	0.00 mg/l	0.00 mg/l	
8	Standard Cl2 No. 1 (0.24 ± 0.09 mg/l)	0.25 mg/l	0.25 mg/l	
9	Standard Cl2 No. 2 (0.91 ± 0.1 mg/l)	0.90 mg/l	0.90 mg/l	
10	Standard Cl2 No. 3 (1.59 ± 0.14 mg/l)	1.57 mg/l	1.57 mg/l	
	DPD-CHLORINE-HR			
11	Blank (0.0 mg/l)	0.0 mg/l	0.0 mg/l	
12	Standard Cl2 No. 1 (2.3 ± 0.2 mg/l)	2.3 mg/l	2.3 mg/l	
13	Standard Cl2 No. 2 (3.9 ± 0.3 mg/l)	3.8 mg/l	3.8 mg/l	
14	Standard Cl2 No. 3 (7.1 ± 0.6 mg/l)	6.9 mg/l	6.9 mg/l	

บริษัท ฮัคค์ (ประเทศไทย) จำกัด: อาคารดี ห้องเลขที่ ดี 3 11 ชั้นที่3 เลขที่ 735/4 ถนนศรีนครินทร์ แขวงพัฒนาการ เขตสวนหลวง กรุงเทพฯ 10250
Tel: +66 (02) 026-3529 | Fax: +66(02) 026-3572 | Tax ID : 0105552107330 | Email: thmarketing@hach.com | **www.th.hach.com**

Ref. Job number ; #5971

Summary of checked

- ☑ The instrument can work normally and efficiently. (เครื่องมือวัดสามารถทำงานได้ปกติและมีประสิทธิภาพ)
- ☐ The instrument can work but it's requiring to maintenance. (เครื่องมือวัดสามารถทำงานได้แต่ต้องบำรุงรักษา)
- ☐ The instrument could not work it's requiring to repair. (เครื่องมือวัดไม่สามารถทำงานได้และต้องการซ่อมบำรุง)

Remark:

Standard Equipment Used

Equipment	Equipment I.D.	
Standard Absorbance DPD-CHLORINE-LR	Lot No. A4150	Exp date : Jun-26
Standard Absorbance DPD-CHLORINE-HR	Lot No. A4162	Exp date : Jun-26
Digital multi meter	S/N: 97820680	Due date: 15-Jul-25
Thermo hygrometer	S/N: 41432443	Due date: 29-Oct-25

Test By :

(Mr.Putthipong Duangsawat)

Service Engineer

Approved by :

(Suanun Sartyangkool)

Assistant Service Division Manager

บริษัท ฮัคค์ (ประเทศไทย) จำกัด: อาคารดี ห้องเลขที่ ดี 3 11 ชั้นที่3 เลขที่ 735/4 ถนนศรีนครินทร์ แขวงพัฒนาการ เขตสวนหลวง กรุงเทพฯ 10250
Tel: +66 (02) 026-3529 | Fax: +66(02) 026-3572 | Tax ID : 0105552107330 | Email: thmarketing@hach.com | **www.th.hach.com**

KH
SGL-CL80100
17/1/25

SCIMET Co., Ltd.
1194 Soi Wachirathamsathit 57, Bangchak,
Phrakhanong, Bangkok 10260 Thailand
Email:scimet2022@gmail.com, Tel: 02 460 9239
https://www.scimet.co.th

NSC-TISI-TIS 17025
CALIBRATION 0454

Certificate No. C07240192

Calibration Certificate

Equipment: SPECTROPHOTOMETER

Model:	DR 3900	Job No.:	KSMT2403543
Serial No.(or ID):	2403637	Received Date:	25 December 2024
Manufacturer:	HACH	Issued Date:	25 December 2024
Condition:	New	Page:	1 of 3

REVIEW BY Ananta B.
APPROVED BY Kanidta H.
NEXT CAL. DATE 25/12/25

Customer

ALS Laboratory Group (Thailand) Co., Ltd
114/1 Moo 8, Karnchanawanich Rd.T. Ban Phru, A Hatyai, Songkhla 90250

Calibration Place

Hach (Thailand) Limited.
Branch 00001, Building D Room No. D3 11, 3rd Floor, No. 735/4, Srinakarin Road,
Pattanakarn, Suanluang, Bangkok 10250 Thailand.

Calibration Date

25 December 2024

Environment Condition

Temperature:	22.2 °C	±	0.5	°C
Humidity:	59.2 %RH	±	2.3	%RH

The Method used

In-house method, WI07, based on ASTM E 275-08 and
ASTM E 387-04

Traceability

This certificate is traceable to the CRM maintained by National Institute of Standards and Technology (NIST) through Starna Scientific Limited.

The standard for Wavelength Certificate No. 108691 and 108692

The standard for Photometric Certificate No. 109010 , 114655

This certificate is issued the units of measurement according to the International System of Units (SI). It provides traceability of measurement to international or national standard or other recognized national standard laboratories.

The measurement uncertainty stated is the expanded uncertainty which is obtained from the standard uncertainty multiplied by the coverage factor (k=2) to provide a level of confidence of approximately 95%. It is determined in accordance with the Guide to Expression of Uncertainty in Measurement (GUM).

These results may be affected by deviations from specified conditions. The results relate only to the items tested, calibrated or sampled. The report shall not be reproduced except in full without approval of SCIMET Co., Ltd.

(Mr. Siwapan Srijan)
Person in charge

SCIMET CO.,LTD

(Mr. Thalerngkeat Poungngam)
Authorized signatory

Condition of reference standards Instruments / CRM:

Instruments	Set No.	Certificate No.	Due date
Holmium Oxide Glass Reference	121512	108691	25-Jan-25
Didymium Oxide Glass Reference	119722	108692	25-Jan-25
Neutral Density Filter Reference	12276	109010 , 114655	2-Feb-25

Calibration Results:

Without Adjustment

Wavelength Accuracy (nm), The spectral bandwidth of Std at 5 nm and UUC at 5 nm

Standard Wavelength (nm)	Unit Under Calibration (nm)	Correction (nm)	Uncertainty of Measurement (± nm)
333.67	333	0.67	0.59
361.02	361	0.02	0.59
417.80	417	0.80	0.59
441.29	441	0.29	0.59
479.88	480	-0.12	0.59
513.75	513	0.75	0.59
528.59	528	0.59	0.59
537.75	537	0.75	0.59
585.56	585	0.56	0.59
641.95	642	-0.05	0.59
684.70	685	-0.30	0.59
747.61	748	-0.39	0.59
807.04	807	0.04	0.59
879.68	880	-0.32	0.59

บริษัท ซายน์เมท จำกัด (SCIMET CO., LTD.)
1194 Soi Wachirathamsathit 57, Bangchak, Phrakhanong, Bangkok 10260 Thailand
Email: scimet2022@gmail.com, Tel: 02 460 9239

SCIMET

Calibration Results:

Without Adjustment

Photometric Accuracy (Absorbance)

Wavelength	Standard absorbance (Abs)	Unit Under Calibration (Abs)	Correction (Abs)	Uncertainty of Measurement(± Abs)
420 nm	0.0000	0.000	0.0000	0.0045
	0.2373	0.234	0.0033	0.0045
	0.5617	0.561	0.0007	0.0045
	0.7392	0.738	0.0012	0.0045
	1.0550	1.056	-0.0010	0.0045
440 nm	0.0000	0.000	0.0000	0.0045
	0.2335	0.231	0.0025	0.0045
	0.5513	0.550	0.0013	0.0045
	0.7230	0.722	0.0010	0.0045
	1.0324	1.032	0.0004	0.0045
465 nm	0.0000	0.000	0.0000	0.0045
	0.2126	0.210	0.0026	0.0045
	0.5036	0.506	-0.0024	0.0045
	0.6735	0.676	-0.0025	0.0045
	0.9615	0.965	-0.0035	0.0045
546.1 nm	0.0000	0.000	0.0000	0.0045
	0.2201	0.217	0.0031	0.0045
	0.5176	0.520	-0.0024	0.0045
	0.6930	0.694	-0.0010	0.0045
	0.9908	0.994	-0.0032	0.0045
590 nm	0.0000	0.000	0.0000	0.0045
	0.2443	0.241	0.0033	0.0045
	0.5530	0.554	-0.0010	0.0045
	0.7196	0.719	0.0006	0.0045
	1.0301	1.031	-0.0009	0.0045
635 nm	0.0000	0.000	0.0000	0.0045
	0.2646	0.261	0.0036	0.0045
	0.5370	0.538	-0.0010	0.0045
	0.6862	0.687	-0.0008	0.0045
	0.9822	0.984	-0.0018	0.0045

The End of Certificate

บริษัท ซายน์เมท จำกัด (SCIMET CO., LTD.)
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ภาคผนวก จ

สำเนาหนังสืออนุญาตขึ้นทะเบียนห้องปฏิบัติการ

วิเคราะห์เอกชน



ที่ อก ๐๓๑๐(๑)/ ๑๖๑๖๘

กรมโรงงานอุตสาหกรรม
ถนนพระรามที่ ๖ แขวงทุ่งพญาไท
เขตราชเทวี กรุงเทพฯ ๑๐๔๐๐

๒๐ พฤศจิกายน ๒๕๖๖

เรื่อง ต่ออายุหนังสือรับขึ้นทะเบียนห้องปฏิบัติการวิเคราะห์เอกชน

เรียน กรรมการผู้จัดการ บริษัท เอแอลเอส แลบอราทอรี กรุ๊ป (ประเทศไทย) จำกัด

อ้างถึง คำขอขึ้นทะเบียน/ต่ออายุ/เปลี่ยนแปลงบุคลากร และชนิดสารมลพิษของห้องปฏิบัติการวิเคราะห์เอกชน ลงวันที่ ๔ สิงหาคม ๒๕๖๖

สิ่งที่ส่งมาด้วย ๑. รายชื่อผู้ควบคุมดูแลห้องปฏิบัติการวิเคราะห์ จำนวน ๑ แผ่น
๒. รายชื่อเจ้าหน้าที่ประจำห้องปฏิบัติการวิเคราะห์ จำนวน ๕ แผ่น
๓. ขอบข่ายสารมลพิษที่ได้รับขึ้นทะเบียนจากกรมโรงงานอุตสาหกรรม จำนวน ๓๑ แผ่น

ตามหนังสือที่อ้างถึง บริษัท เอแอลเอส แลบอราทอรี กรุ๊ป (ประเทศไทย) จำกัด ขอต่ออายุหนังสือรับขึ้นทะเบียนห้องปฏิบัติการวิเคราะห์เอกชน เลขทะเบียน ว-๒๐๔ สถานที่ตั้งเลขที่ ๑๐๔ ซอยพัฒนาการ ๔๐ ถนนพัฒนาการ แขวงพัฒนาการ เขตสวนหลวง กรุงเทพมหานคร ต่อกรมโรงงานอุตสาหกรรม นั้น

กรมโรงงานอุตสาหกรรมพิจารณาแล้ว ให้บริษัท เอแอลเอส แลบอราทอรี กรุ๊ป (ประเทศไทย) จำกัด ต่ออายุหนังสือรับขึ้นทะเบียนห้องปฏิบัติการวิเคราะห์เอกชน โดยมีองค์ประกอบดังนี้

ก. ผู้ควบคุมดูแลห้องปฏิบัติการวิเคราะห์ จำนวน ๖ ราย ตามสิ่งที่ส่งมาด้วย ๑

ข. เจ้าหน้าที่ประจำห้องปฏิบัติการวิเคราะห์ ๑๘๑ ราย ตามสิ่งที่ส่งมาด้วย ๒

ค. ขอบข่ายสารมลพิษที่ได้รับขึ้นทะเบียนให้วิเคราะห์ในน้ำเสีย น้ำใต้ดิน อากาศเสีย สิ่งปฏิกูลหรือวัสดุที่ไม่ใช้แล้ว และดิน ตามสิ่งที่ส่งมาด้วย ๓

หนังสือฉบับนี้จะหมดอายุในวันที่ ๒ กันยายน ๒๕๖๙ หากประสงค์จะต่ออายุหนังสือรับขึ้นทะเบียนห้องปฏิบัติการวิเคราะห์เอกชน ให้ยื่นคำขอต่ออายุพร้อมเอกสารประกอบคำขอต่อกรมโรงงานอุตสาหกรรม ภายใน ๓๐ วัน ก่อนวันสิ้นอายุของหนังสือรับขึ้นทะเบียนห้องปฏิบัติการวิเคราะห์เอกชน ทั้งนี้ สามารถยื่นคำขอผ่านระบบอิเล็กทรอนิกส์ได้ที่หน้าเว็บไซต์กรมโรงงานอุตสาหกรรม

จึงเรียนมาเพื่อทราบ

ขอแสดงความนับถือ

(นายศิระ จันทร์เฉิด)
นักวิทยาศาสตร์เชี่ยวชาญ รักษาราชการแทน
ผู้อำนวยการกองวิจัยและเตือนภัยมลพิษโรงงาน
ปฏิบัติราชการแทนอธิบดีกรมโรงงานอุตสาหกรรม

กองวิจัยและเตือนภัยมลพิษโรงงาน
กลุ่มมาตรฐานวิธีการวิเคราะห์ทดสอบมลพิษและทะเบียนห้องปฏิบัติการ
โทร. ๐ ๒๔๓๐ ๖๓๑๒ ต่อ ๒๑๐๓-๕
โทรสาร ๐ ๒๔๓๐ ๖๓๑๒ ต่อ ๒๑๙๙
ไปรษณีย์อิเล็กทรอนิกส์ saraban@diw.mail.go.th

สิ่งที่ส่งมาด้วย ๑

เอกสารแนบท้ายหนังสือรับต่ออายุขึ้นทะเบียนห้องปฏิบัติการวิเคราะห์เอกชน
บริษัท เอแอลเอส แลบอราทอรี กรุ๊ป (ประเทศไทย) จำกัด เลขทะเบียน ว-๒๐๔
ที่ อก ๐๓๑๐(๑)/ ๑๖๑๖๘ ลงวันที่ ๒๐ พฤศจิกายน ๒๕๖๖

ก. ผู้ควบคุมดูแลห้องปฏิบัติการวิเคราะห์ จำนวน ๖ ราย

๑) นางสาวยุพาพร จันทร์เปล่ง	ทะเบียนเลขที่ ว-๒๐๔-ค-๐๐๐๑
๒) นางสาวชัชนัย โกมารกุล ณ นคร	ทะเบียนเลขที่ ว-๒๐๔-ค-๐๐๐๒
๓) นายศรายุทธ จิตรานนท์	ทะเบียนเลขที่ ว-๒๐๔-ค-๐๐๐๓
๔) นางสาวกนกกร เอนก	ทะเบียนเลขที่ ว-๒๐๔-ค-๐๐๐๔
๕) นายสุริยา สอนแก้ว	ทะเบียนเลขที่ ว-๒๐๔-ค-๐๐๐๕
๖) นายวิชาญ ชุณหรัต	ทะเบียนเลขที่ ว-๒๐๔-ค-๐๐๐๖

เอกสารแนบท้ายหนังสือรับต่ออายุขึ้นทะเบียนห้องปฏิบัติการวิเคราะห์เอกชน
บริษัท เอแอลเอส แลบอราทอรี กรุ๊ป (ประเทศไทย) จำกัด เลขทะเบียน ว-๒๐๔
ที่ อก ๐๓๑๐(๑)/ ๑๖๑๖๘ ลงวันที่ ๒๐ พฤศจิกายน ๒๕๖๖

ข. เจ้าหน้าที่ประจำห้องปฏิบัติการวิเคราะห์ จำนวน ๑๘๑ ราย

๑) นายกาจบัณฑิต กิตติศุภวณิชย์	ทะเบียนเลขที่ ว-๒๐๔-จ-๐๐๐๑
๒) นายภัทรพล สว่างใจธรรม์	ทะเบียนเลขที่ ว-๒๐๔-จ-๐๐๐๒
๓) นายนราธิป เทือกชัยคำ	ทะเบียนเลขที่ ว-๒๐๔-จ-๐๐๐๓
๔) นายศิริโชค พงษ์ประสม	ทะเบียนเลขที่ ว-๒๐๔-จ-๐๐๐๔
๕) นายณัฐวุฒิ ด้วงแพง	ทะเบียนเลขที่ ว-๒๐๔-จ-๐๐๐๕
๖) นางสาวจินดา โขจุลธรรม	ทะเบียนเลขที่ ว-๒๐๔-จ-๐๐๐๖
๗) นางสาวสาวิตรี น้อยเสงี่ยม	ทะเบียนเลขที่ ว-๒๐๔-จ-๐๐๐๗
๘) นางสาวชณัฐกาญจน์ อิ่มชม	ทะเบียนเลขที่ ว-๒๐๔-จ-๐๐๐๘
๙) นางสาวนรินทร์ สายเส็ง	ทะเบียนเลขที่ ว-๒๐๔-จ-๐๐๐๙
๑๐) นางสาวนันทวดี สมบูรณ์	ทะเบียนเลขที่ ว-๒๐๔-จ-๐๐๑๐
๑๑) นางสาวศรัณยา เฉลิมธำรงค์	ทะเบียนเลขที่ ว-๒๐๔-จ-๐๐๑๑
๑๒) นางสาวธัญญธร มงคลจิรวุฒิ	ทะเบียนเลขที่ ว-๒๐๔-จ-๐๐๑๒
๑๓) นางสาวศิริลักษณ์ บุนนาค	ทะเบียนเลขที่ ว-๒๐๔-จ-๐๐๑๓
๑๔) นายนพพงศ์ จันทรุพันธุ์	ทะเบียนเลขที่ ว-๒๐๔-จ-๐๐๑๔
๑๕) นายนรเศรษฐ์ โกมาลย์	ทะเบียนเลขที่ ว-๒๐๔-จ-๐๐๑๕
๑๖) นายธันวา จริยา	ทะเบียนเลขที่ ว-๒๐๔-จ-๐๐๑๖
๑๗) นางสาวเกศรินทร์ แก้วมั่น	ทะเบียนเลขที่ ว-๒๐๔-จ-๐๐๑๗
๑๘) นางสาวสุวิมล ชัยเรืองวุฒิ	ทะเบียนเลขที่ ว-๒๐๔-จ-๐๐๑๘
๑๙) นางสาวสุชาดา ธรรมถาวร	ทะเบียนเลขที่ ว-๒๐๔-จ-๐๐๑๙
๒๐) นางสาวเปมิกา ชัยเดชธนกุล	ทะเบียนเลขที่ ว-๒๐๔-จ-๐๐๒๐
๒๑) นางสาวศศิธร หมูสวัสดิ์	ทะเบียนเลขที่ ว-๒๐๔-จ-๐๐๒๑
๒๒) นางสาวเสาวลักษณ์ ภู่นภาอำพร	ทะเบียนเลขที่ ว-๒๐๔-จ-๐๐๒๒
๒๓) นายอภิสิทธิ์ สิงหา	ทะเบียนเลขที่ ว-๒๐๔-จ-๐๐๒๓
๒๔) นายศักดิ์สิทธิ์ ไพศาลพิสุทธิ์	ทะเบียนเลขที่ ว-๒๐๔-จ-๐๐๒๔
๒๕) ว่าที่ร้อยตรีหญิง พรรณิภา ขำเจริญ	ทะเบียนเลขที่ ว-๒๐๔-จ-๐๐๒๕
๒๖) นางจิลดา คำภูแก้ว	ทะเบียนเลขที่ ว-๒๐๔-จ-๐๐๒๖
๒๗) นางสาวอรวรรณ รักยง	ทะเบียนเลขที่ ว-๒๐๔-จ-๐๐๒๗
๒๘) นางสาวนพรัตน์ แย้มกรานต์	ทะเบียนเลขที่ ว-๒๐๔-จ-๐๐๒๘
๒๙) นายจุลเดช วารินทร์	ทะเบียนเลขที่ ว-๒๐๔-จ-๐๐๒๙
๓๐) นางสาวดายุรัตน์ ร้องคำ	ทะเบียนเลขที่ ว-๒๐๔-จ-๐๐๓๐
๓๑) นายพรมมี ศรีปัตเนตร	ทะเบียนเลขที่ ว-๒๐๔-จ-๐๐๓๑
๓๒) นายอุทิศ อุ่นสิม	ทะเบียนเลขที่ ว-๒๐๔-จ-๐๐๓๒
๓๓) ว่าที่ร้อยตรี เฉลิมเกียรติ อมรศรีเสริม	ทะเบียนเลขที่ ว-๒๐๔-จ-๐๐๓๓
๓๔) นางสาววริยา สร้างนา	ทะเบียนเลขที่ ว-๒๐๔-จ-๐๐๓๔
๓๕) นายอนุพงศ์ รัตนศรีประเสริฐ	ทะเบียนเลขที่ ว-๒๐๔-จ-๐๐๓๕

๓๖) นางสาวจุฑารัตน์...

๓๖) นางสาวจุฑารัตน์ โอนสันเทียะ ทะเบียนเลขที่ ว-๒๐๔-จ-๐๐๓๖
๓๗) นางสาวจารุวรรณ พิมพ์อภิกฤติยา ทะเบียนเลขที่ ว-๒๐๔-จ-๐๐๓๗
๓๘) นางสาวปรางค์ทิพย์ กิจไพศาลศักดิ์ ทะเบียนเลขที่ ว-๒๐๔-จ-๐๐๓๘
๓๙) นางสาวเตือนใจ ทางกลาง ทะเบียนเลขที่ ว-๒๐๔-จ-๐๐๓๙
๔๐) นางสาวจิราพร ศิริเวช ทะเบียนเลขที่ ว-๒๐๔-จ-๐๐๔๐
๔๑) นายวรากร ผูกรักษ์ ทะเบียนเลขที่ ว-๒๐๔-จ-๐๐๔๑
๔๒) นายทนง วิริยะสหกิจ ทะเบียนเลขที่ ว-๒๐๔-จ-๐๐๔๒
๔๓) นายธนิต เจนจบ ทะเบียนเลขที่ ว-๒๐๔-จ-๐๐๔๓
๔๔) นายคณิศร ขำเพชร ทะเบียนเลขที่ ว-๒๐๔-จ-๐๐๔๔
๔๕) นายภูวิช พรหมสะอาด ทะเบียนเลขที่ ว-๒๐๔-จ-๐๐๔๕
๔๖) นายธนเดช โภคาพิพัฒน์ ทะเบียนเลขที่ ว-๒๐๔-จ-๐๐๔๖
๔๗) นายชวฤทธิ์ วงษ์จันทร์ ทะเบียนเลขที่ ว-๒๐๔-จ-๐๐๔๗
๔๘) นายอาทิตย์ ศรีเสน ทะเบียนเลขที่ ว-๒๐๔-จ-๐๐๔๘
๔๙) นายเจษดินทร์ คงศักดิไทย ทะเบียนเลขที่ ว-๒๐๔-จ-๐๐๔๙
๕๐) นายจรัส บุญยิ่ง ทะเบียนเลขที่ ว-๒๐๔-จ-๐๐๕๐
๕๑) นายธนาณัติ เอนก ทะเบียนเลขที่ ว-๒๐๔-จ-๐๐๕๑
๕๒) นายอภิวัฒน์ ทุมทนู ทะเบียนเลขที่ ว-๒๐๔-จ-๐๐๕๒
๕๓) นางสาวสุภาขวัญ มาก ทะเบียนเลขที่ ว-๒๐๔-จ-๐๐๕๓
๕๔) นางสาวทัตพร ชวาลสมบูรณ์ ทะเบียนเลขที่ ว-๒๐๔-จ-๐๐๕๔
๕๕) นางสาวธิติมา บุญเพ็ง ทะเบียนเลขที่ ว-๒๐๔-จ-๐๐๕๕
๕๖) นางสาวภานุมาศ นามวัฒน์ ทะเบียนเลขที่ ว-๒๐๔-จ-๐๐๕๖
๕๗) นางสาวอุไรรัตน์ ทึงสร้างแป้น ทะเบียนเลขที่ ว-๒๐๔-จ-๐๐๕๗
๕๘) นายธีรวัฒน์ ปวงสุข ทะเบียนเลขที่ ว-๒๐๔-จ-๐๐๕๘
๕๙) นายอิทธิพล ยะโส ทะเบียนเลขที่ ว-๒๐๔-จ-๐๐๕๙
๖๐) นายประพจน์ วรรณชูชัย ทะเบียนเลขที่ ว-๒๐๔-จ-๐๐๖๐
๖๑) นายชยธร พวงทิพย์ ทะเบียนเลขที่ ว-๒๐๔-จ-๐๐๖๑
๖๒) นางสาวกนกวรรณ จันทบาล ทะเบียนเลขที่ ว-๒๐๔-จ-๐๐๖๒
๖๓) นายสิทธิโชค ธงเงิน ทะเบียนเลขที่ ว-๒๐๔-จ-๐๐๖๓
๖๔) นางศิลาวรรณ ใจบุญ ทะเบียนเลขที่ ว-๒๐๔-จ-๐๐๖๔
๖๕) นางสาวพรรณธิดา พุ่มคง ทะเบียนเลขที่ ว-๒๐๔-จ-๐๐๖๕
๖๖) นายนวภัทร ศรีวิริยะ ทะเบียนเลขที่ ว-๒๐๔-จ-๐๐๖๖
๖๗) นายสุวิชา ทองอ่อน ทะเบียนเลขที่ ว-๒๐๔-จ-๐๐๖๗
๖๘) นายวิญญู บุญตะนัย ทะเบียนเลขที่ ว-๒๐๔-จ-๐๐๖๘
๖๙) นายสมบูรณ์ บุตรจันทร์ ทะเบียนเลขที่ ว-๒๐๔-จ-๐๐๖๙
๗๐) นายวิรัตน์ ไชยนะรา ทะเบียนเลขที่ ว-๒๐๔-จ-๐๐๗๐
๗๑) นายนฤเบศน์ เพิ่มพูน ทะเบียนเลขที่ ว-๒๐๔-จ-๐๐๗๑
๗๒) นายจิรณัฐ ขาวละออ ทะเบียนเลขที่ ว-๒๐๔-จ-๐๐๗๒
๗๓) นายอัสรี นามบุรี ทะเบียนเลขที่ ว-๒๐๔-จ-๐๐๗๓
๗๔) นายอัศวเรศ จ่อสาว ทะเบียนเลขที่ ว-๒๐๔-จ-๐๐๗๔

๗๕) นายประเสริฐ...

๗๕) นายประเสริฐ สุระขันธ์ ทะเบียนเลขที่ ว-๒๐๔-จ-๐๐๗๕
๗๖) นายนุกูล จันทร์เนียม ทะเบียนเลขที่ ว-๒๐๔-จ-๐๐๗๖
๗๗) นายพีรพงษ์ ทองคูณปรีดา ทะเบียนเลขที่ ว-๒๐๔-จ-๐๐๗๗
๗๘) นายนฤพล ทองนุช ทะเบียนเลขที่ ว-๒๐๔-จ-๐๐๗๘
๗๙) นายอนุวัฒน์ ม่วงแพร ทะเบียนเลขที่ ว-๒๐๔-จ-๐๐๗๙
๘๐) นายเจตศราวุฒิ ปัตตะมะ ทะเบียนเลขที่ ว-๒๐๔-จ-๐๐๘๐
๘๑) นายกฤษณะ สายวรรณ์ ทะเบียนเลขที่ ว-๒๐๔-จ-๐๐๘๑
๘๒) นายพิชัย บุญยงค์ ทะเบียนเลขที่ ว-๒๐๔-จ-๐๐๘๒
๘๓) นายภานุพงศ์ โฮมวงศ์ ทะเบียนเลขที่ ว-๒๐๔-จ-๐๐๘๓
๘๔) นายสามารถ คุ้มปลี ทะเบียนเลขที่ ว-๒๐๔-จ-๐๐๘๔
๘๕) นายสัญชัย โกศรีนาม ทะเบียนเลขที่ ว-๒๐๔-จ-๐๐๘๕
๘๖) นายณัฐวุฒิ ศรีประเสริฐ ทะเบียนเลขที่ ว-๒๐๔-จ-๐๐๘๖
๘๗) นายชวัลธัช นาคพนม ทะเบียนเลขที่ ว-๒๐๔-จ-๐๐๘๗
๘๘) นายพงศธร ชัยทิพย์ ทะเบียนเลขที่ ว-๒๐๔-จ-๐๐๘๘
๘๙) นายสิทธิโชค ทาสีดา ทะเบียนเลขที่ ว-๒๐๔-จ-๐๐๘๙
๙๐) นายธนากร อินสุตา ทะเบียนเลขที่ ว-๒๐๔-จ-๐๐๙๐
๙๑) นางสาววรณิชชา ชาติวันชัย ทะเบียนเลขที่ ว-๒๐๔-จ-๐๐๙๑
๙๒) นางสาวพิมพ์ตะวัน มินากูล ทะเบียนเลขที่ ว-๒๐๔-จ-๐๐๙๒
๙๓) นางสาวเพชรัตน์ สิงห์สมบุญ ทะเบียนเลขที่ ว-๒๐๔-จ-๐๐๙๓
๙๔) นางสาวชญานิน พรหมจันทร์ ทะเบียนเลขที่ ว-๒๐๔-จ-๐๐๙๔
๙๕) นายกีรติ ทวีราช ทะเบียนเลขที่ ว-๒๐๔-จ-๐๐๙๕
๙๖) นายจักริน หมั่นวิชา ทะเบียนเลขที่ ว-๒๐๔-จ-๐๐๙๖
๙๗) นายฉัตรชัย สุขเปีย ทะเบียนเลขที่ ว-๒๐๔-จ-๐๐๙๗
๙๘) นายณรนนท์ ต๊ะทองคำ ทะเบียนเลขที่ ว-๒๐๔-จ-๐๐๙๘
๙๙) นายดุลยพล สนนอก ทะเบียนเลขที่ ว-๒๐๔-จ-๐๐๙๙
๑๐๐) นายทักษ์ดนัย อุบลศรี ทะเบียนเลขที่ ว-๒๐๔-จ-๐๑๐๐
๑๐๑) นายธนศวร นามะกุณณา ทะเบียนเลขที่ ว-๒๐๔-จ-๐๑๐๑
๑๐๒) นายธิติพงศ์ บัวแดง ทะเบียนเลขที่ ว-๒๐๔-จ-๐๑๐๒
๑๐๓) นายนนทชัย อุปถัมภ์ ทะเบียนเลขที่ ว-๒๐๔-จ-๐๑๐๓
๑๐๔) นายนัฐพล คุณสุทธิ์ ทะเบียนเลขที่ ว-๒๐๔-จ-๐๑๐๔
๑๐๕) นายนันทวัฒน์ สาริน ทะเบียนเลขที่ ว-๒๐๔-จ-๐๑๐๕
๑๐๖) นายปิยะนัฐ พลมะศรี ทะเบียนเลขที่ ว-๒๐๔-จ-๐๑๐๖
๑๐๗) นายพงศ์สิริ โสมเขียว ทะเบียนเลขที่ ว-๒๐๔-จ-๐๑๐๗
๑๐๘) นายพีรพัฒน์ กำคำ ทะเบียนเลขที่ ว-๒๐๔-จ-๐๑๐๘
๑๐๙) นายภาณุพงศ์ มานิตย์ ทะเบียนเลขที่ ว-๒๐๔-จ-๐๑๐๙
๑๑๐) นายมงคล ผลาทิพย์ ทะเบียนเลขที่ ว-๒๐๔-จ-๐๑๑๐
๑๑๑) นายสิรินนท์ ทองอั่น ทะเบียนเลขที่ ว-๒๐๔-จ-๐๑๑๑
๑๑๒) นายอเนชา ทันสมัย ทะเบียนเลขที่ ว-๒๐๔-จ-๐๑๑๒
๑๑๓) นายอดิศักดิ์ ผมไผ ทะเบียนเลขที่ ว-๒๐๔-จ-๐๑๑๓

๑๑๔) นายอนันตชัย...

๑๑๔) นายอนันตชัย วีสม ทะเบียนเลขที่ ว-๒๐๔-จ-๐๑๑๔
๑๑๕) นายวรวุธ ดีนัก ทะเบียนเลขที่ ว-๒๐๔-จ-๐๑๑๕
๑๑๖) นายแสงตะวัน นะตะสัต ทะเบียนเลขที่ ว-๒๐๔-จ-๐๑๑๖
๑๑๗) นายยุทธพงศ์ รัตนะ ทะเบียนเลขที่ ว-๒๐๔-จ-๐๑๑๗
๑๑๘) นายชยัณวุฒิ ไชยฮะนิจ ทะเบียนเลขที่ ว-๒๐๔-จ-๐๑๑๘
๑๑๙) นายวิศรุต ศรีธรรมมา ทะเบียนเลขที่ ว-๒๐๔-จ-๐๑๑๙
๑๒๐) นายนนทกร เผือกผ่อง ทะเบียนเลขที่ ว-๒๐๔-จ-๐๑๒๐
๑๒๑) นายกำชัย สุทธะ ทะเบียนเลขที่ ว-๒๐๔-จ-๐๑๒๑
๑๒๒) นางสาวณัฐภรณ์ บุญตะนัย ทะเบียนเลขที่ ว-๒๐๔-จ-๐๑๒๒
๑๒๓) นางสาวพัชรินทร์ แสนสร้อย ทะเบียนเลขที่ ว-๒๐๔-จ-๐๑๒๓
๑๒๔) นายไพรวัลย์ เปรี่ยมพิมาย ทะเบียนเลขที่ ว-๒๐๔-จ-๐๑๒๔
๑๒๕) นางสาวศุภมาศ ทองมาก ทะเบียนเลขที่ ว-๒๐๔-จ-๐๑๒๕
๑๒๖) นางสาวลลิตา จิตรสว่าง ทะเบียนเลขที่ ว-๒๐๔-จ-๐๑๒๖
๑๒๗) นางสาวชไมพร เสิกภู่เขียว ทะเบียนเลขที่ ว-๒๐๔-จ-๐๑๒๗
๑๒๘) นางสาวกฤติมาพร คำมีแก่น ทะเบียนเลขที่ ว-๒๐๔-จ-๐๑๒๘
๑๒๙) นางสาวสกุลรัตน์ ภาคภูมิ ทะเบียนเลขที่ ว-๒๐๔-จ-๐๑๒๙
๑๓๐) นางสาวไพรินทร์ ศรีรูปี ทะเบียนเลขที่ ว-๒๐๔-จ-๐๑๓๐
๑๓๑) นางสาวทิพเนตร ผุยปัญญา ทะเบียนเลขที่ ว-๒๐๔-จ-๐๑๓๑
๑๓๒) นางสาวสาธิตา ปานทอง ทะเบียนเลขที่ ว-๒๐๔-จ-๐๑๓๒
๑๓๓) นางสาวอริสา ทองนวล ทะเบียนเลขที่ ว-๒๐๔-จ-๐๑๓๓
๑๓๔) นางสาวอรยา ค้าคล่อง ทะเบียนเลขที่ ว-๒๐๔-จ-๐๑๓๔
๑๓๕) นางสาวชุดาภรณ์ สุนทรสนาน ทะเบียนเลขที่ ว-๒๐๔-จ-๐๑๓๕
๑๓๖) นางสาวอัญชลี คำจันทร์ ทะเบียนเลขที่ ว-๒๐๔-จ-๐๑๓๖
๑๓๗) นายบุญฤทธิ์ เอี่ยมเทศ ทะเบียนเลขที่ ว-๒๐๔-จ-๐๑๓๗
๑๓๘) นางสาวศุภรดา ปั้นมยุรา ทะเบียนเลขที่ ว-๒๐๔-จ-๐๑๓๘
๑๓๙) นางสาวพาฤดี คุณนาน ทะเบียนเลขที่ ว-๒๐๔-จ-๐๑๓๙
๑๔๐) นางสาวจิราเจต ฟองดา ทะเบียนเลขที่ ว-๒๐๔-จ-๐๑๔๐
๑๔๑) นางสาวอารยา มีชัย ทะเบียนเลขที่ ว-๒๐๔-จ-๐๑๔๑
๑๔๒) นางสาววิชชุตา นาคผจญ ทะเบียนเลขที่ ว-๒๐๔-จ-๐๑๔๒
๑๔๓) นางสาวนันทิยา จันทะลุน ทะเบียนเลขที่ ว-๒๐๔-จ-๐๑๔๓
๑๔๔) นายกิตติพงศ์ แซ่ลี้ ทะเบียนเลขที่ ว-๒๐๔-จ-๐๑๔๔
๑๔๕) นายอนุวัติ ภูถวิล ทะเบียนเลขที่ ว-๒๐๔-จ-๐๑๔๕
๑๔๖) นายธีรพล แสงทอง ทะเบียนเลขที่ ว-๒๐๔-จ-๐๑๔๖
๑๔๗) นายศักดิ์พิพัฒน์ บุญมั่น ทะเบียนเลขที่ ว-๒๐๔-จ-๐๑๔๗
๑๔๘) นายฐิติวัลค์ เอมอุไร ทะเบียนเลขที่ ว-๒๐๔-จ-๐๑๔๘
๑๔๙) นายชัยณรงค์ ศรีบุรินทร์ ทะเบียนเลขที่ ว-๒๐๔-จ-๐๑๔๙
๑๕๐) นางสาวอัจฉราวรรณ สวนสนอง ทะเบียนเลขที่ ว-๒๐๔-จ-๐๑๕๐
๑๕๑) นางสาวณัฐฐาพร สิงหา ทะเบียนเลขที่ ว-๒๐๔-จ-๐๑๕๑
๑๕๒) นายภีมเรศ แหยมโต ทะเบียนเลขที่ ว-๒๐๔-จ-๐๑๕๒

๑๕๓) นางสาวอุบล...

๑๕๓) นางสาวอุบล เศิกศิริ ทะเบียนเลขที่ ว-๒๐๔-จ-๐๑๕๓
๑๕๔) นางสาวมโนรัตน์ ทองบุตร ทะเบียนเลขที่ ว-๒๐๔-จ-๐๑๕๔
๑๕๕) นายภาคภูมิ แทนไทย ทะเบียนเลขที่ ว-๒๐๔-จ-๐๑๕๕
๑๕๖) นางสาวสุภาณัฐ เมล์พ่วง ทะเบียนเลขที่ ว-๒๐๔-จ-๐๑๕๖
๑๕๗) นางสาวพรทิวา สาตาชนม์ ทะเบียนเลขที่ ว-๒๐๔-จ-๐๑๕๗
๑๕๘) นายเอกวิทย์ วันทะนา ทะเบียนเลขที่ ว-๒๐๔-จ-๐๑๕๘
๑๕๙) นายไตรมณฑล ทิพย์วรรณ ทะเบียนเลขที่ ว-๒๐๔-จ-๐๑๕๙
๑๖๐) นายจิรเมธ ประเสริฐสิริพงศ์ ทะเบียนเลขที่ ว-๒๐๔-จ-๐๑๖๐
๑๖๑) นายจิรายุส เกษมสุข ทะเบียนเลขที่ ว-๒๐๔-จ-๐๑๖๑
๑๖๒) นายจีรศักดิ์ ศรีวิชัย ทะเบียนเลขที่ ว-๒๐๔-จ-๐๑๖๒
๑๖๓) นายณัฐกฤษณ์ สะพานแก้ว ทะเบียนเลขที่ ว-๒๐๔-จ-๐๑๖๓
๑๖๔) นายบูรณศักดิ์ ปะทิ ทะเบียนเลขที่ ว-๒๐๔-จ-๐๑๖๔
๑๖๕) นายปัณณวิชญ์ เสมอทรัพย์ ทะเบียนเลขที่ ว-๒๐๔-จ-๐๑๖๕
๑๖๖) นายพิษณุพงษ์ ไชยา ทะเบียนเลขที่ ว-๒๐๔-จ-๐๑๖๖
๑๖๗) นายภัทรพงษ์ มณฑาทอง ทะเบียนเลขที่ ว-๒๐๔-จ-๐๑๖๗
๑๖๘) นายวสันต์ ตรีนกุล ทะเบียนเลขที่ ว-๒๐๔-จ-๐๑๖๘
๑๖๙) นายภาณุเดช เพชรอุด ทะเบียนเลขที่ ว-๒๐๔-จ-๐๑๖๙
๑๗๐) นายอนุกูล วิละแสง ทะเบียนเลขที่ ว-๒๐๔-จ-๐๑๗๐
๑๗๑) นายภัทรพงษ์ มีสุข ทะเบียนเลขที่ ว-๒๐๔-จ-๐๑๗๑
๑๗๒) นางสาวนุชรวี ลีละทีป ทะเบียนเลขที่ ว-๒๐๔-จ-๐๑๗๒
๑๗๓) นางสาวสุภาวดี โกศรีนาม ทะเบียนเลขที่ ว-๒๐๔-จ-๐๑๗๓
๑๗๔) นางสาวอรณิช เทียนดำ ทะเบียนเลขที่ ว-๒๐๔-จ-๐๑๗๔
๑๗๕) นางสาวพรเพ็ญ ชอบสอน ทะเบียนเลขที่ ว-๒๐๔-จ-๐๑๗๕
๑๗๖) นางสาววันวิสา ขอนพิกุล ทะเบียนเลขที่ ว-๒๐๔-จ-๐๑๗๖
๑๗๗) นางสาวอรวรรณ เถาว์ทอง ทะเบียนเลขที่ ว-๒๐๔-จ-๐๑๗๗
๑๗๘) นางสาวอัยย์ลิณ เมอร์วิณณ์ ทะเบียนเลขที่ ว-๒๐๔-จ-๐๑๗๘
๑๗๙) นางสาวรวิสรา คุ่ยครอง ทะเบียนเลขที่ ว-๒๐๔-จ-๐๑๗๙
๑๘๐) นายวุฒิกร ศิริวรรณ ทะเบียนเลขที่ ว-๒๐๔-จ-๐๑๘๐
๑๘๑) นางสาวจารุวรรณ กระจ่างพันธุ์ ทะเบียนเลขที่ ว-๒๐๔-จ-๐๑๘๑

เอกสารแนบท้ายหนังสือรับต่ออายุขึ้นทะเบียนห้องปฏิบัติการวิเคราะห์เอกชน
บริษัท เอแอลเอส แลบอราทอรี กรุ๊ป (ประเทศไทย) จำกัด เลขทะเบียน ว-๒๐๔
ที่ อก ๐๓๑๐(๑)/ ๑๖๑๖๘ ลงวันที่ ๒๐ พฤศจิกายน ๒๕๖๖

ค. ขอบข่ายสารมลพิษที่ได้รับขึ้นทะเบียนจากกรมโรงงานอุตสาหกรรม จำนวน ๓๗๔ รายการ

น้ำเสีย จำนวน 60 รายการ

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
1	Aldicarb	High-Performance Liquid Chromatographic Method[4]
2	Aldicarb Sulfone	High-Performance Liquid Chromatographic Method[4]
3	Aldicarb Sulfoxide	High-Performance Liquid Chromatographic Method[4]
4	Aldrin	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method[4]
5	Arsenic	1) Digestion, Inductively Coupled Plasma Method[4] 2) Digestion, Inductively Coupled Plasma/ Mass Spectrometric Method[4]
6	Barium	1) Digestion, Inductively Coupled Plasma Method[4] 2) Digestion, Inductively Coupled Plasma/ Mass Spectrometric Method[4]
7	α-BHC	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method[4]
8	β-BHC	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method[4]
9	δ-BHC	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method[4]
10	γ-BHC	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method[4]
11	Biochemical Oxygen Demand	1) 5-Day BOD Test, Azide Modification Method[4] 2) 5-Day BOD Test, Membrane Electrode Method[4]
12	Carbaryl	High-Performance Liquid Chromatographic Method[4]
13	Carbofuran	High-Performance Liquid Chromatographic Method[4]
14	Cadmium	1) Digestion, Inductively Coupled Plasma Method[4] 2) Digestion, Inductively Coupled Plasma/ Mass Spectrometric Method[4]
15	Chemical Oxygen Demand	1) Closed Reflux, Colorimetric Method[4] 2) Closed Reflux, Tritimetric Method[4]
16	Chlordane	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method[4]
17	Chromium	1) Digestion, Inductively Coupled Plasma Method[4] 2) Digestion, Inductively Coupled Plasma/ Mass Spectrometric Method[4]
18	Color	ADMI Weighted-Ordinate Spectrophotometric Method[4]

19 Copper...

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
19	Copper	1) Digestion, Inductively Coupled Plasma Method[4] 2) Digestion, Inductively Coupled Plasma/ Mass Spectrometric Method[4]
20	Cyanide	Distillation, Colorimetric Method[4]
21	2,4´-DDD	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method[4]
22	4,4´-DDD	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method[4]
23	2,4´-DDE	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method[4]
24	4,4´-DDE	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method[4]
25	2,4´-DDT	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method[4]
26	4,4´-DDT	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method[4]
27	Dieldrin	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method[4]
28	Endosulfan Sulfate	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method[4]
29	Endosulfan I	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method[4]
30	Endosulfan II	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method[4]
31	Endrin	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method[4]
32	Endrin Aldehyde	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method[4]
33	Formaldehyde	Distillation, Colorimetric Method[3]
34	Free Chlorine	1) DPD Ferrous Titrimetric Method[4] 2) DPD Colorimetric Method[4]
35	Heptachlor	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method[4]
36	Heptachlor Epoxide	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method[4]
37	Hexavalent Chromium	Colorimetric Method[4]
38	3-Hydroxycarbofuran	High-Performance Liquid Chromatographic Method[4]
39	Lead	1) Digestion, Inductively Coupled Plasma Method[4] 2) Digestion, Inductively Coupled Plasma/ Mass Spectrometric Method[4]

40 Manganese...

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
40	Manganese	1) Digestion, Inductively Coupled Plasma Method[4] 2) Digestion, Inductively Coupled Plasma/ Mass Spectrometric Method[4]
41	Mercury	1) Digestion, Cold-Vapor Atomic Absorption Spectrometric Method[4] 2) Digestion, Inductively Coupled Plasma/ Mass spectrometric Method[4]
42	Methiocarb	High-Performance Liquid Chromatographic Method[4]
43	Methoxychlor	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method[4]
44	Methomyl	High-Performance Liquid Chromatographic Method[4]
45	Nickel	1) Digestion, Inductively Coupled Plasma Method[4] 2) Digestion, Inductively Coupled Plasma/ Mass Spectrometric Method[4]
46	Oil & Grease	1) Liquid-Liquid, Partition-Gravimetric Method[4] 2) Soxhlet Extraction Method[4]
47	Oxamyl	High-Performance Liquid Chromatographic Method[4]
48	Propoxur	High-Performance Liquid Chromatographic Method[4]
49	pH	Electrometric Method[4]
50	Phenols	1) Distillation, Chloroform Extraction Method[4] 2) Distillation, Direct Photometric Method[4]
51	Selenium	1) Digestion, Inductively Coupled Plasma Method[4] 2) Digestion, Inductively Coupled Plasma/ Mass Spectrometric Method[4]
52	Sulfide	Iodometric Method[4]
53	Temperature	Laboratory and Field Methods[4]
54	Total Dissolved Solids	Dried at 180 ^{0}C[4]
55	Total Kjeldahl Nitrogen	Semi-Micro Kjeldahl Method[4]
56	Total Phosphorous	Digestion, Colorimetric Method[4]
57	Total Suspended Solids	Dried from 103-105 ^{0}C[4]
58	Toxaphene	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method[4]
59	Trivalent Chromium	1) Digestion, Inductively Coupled Plasma Method; Colorimetric Method; Calculation[4] 2) Digestion, Inductively Coupled Plasma/ Mass Spectrometric Method; Colorimetric Method; Calculation[4]
60	Zinc	1) Digestion, Inductively Coupled Plasma Method[4] 2) Digestion, Inductively Coupled Plasma/Mass Spectrometric Method[4]

น้ำใต้ดิน...

น้ำใต้ดิน จำนวน 126 รายการ

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
1	Acenaphthene	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method[4]
2	Acetone	Purge and Trap, Gas Chromatographic/ Mass Spectrometric Method[4]
3	Aldrin	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method[4]
4	Anthracene	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method[4]
5	Antimony	1) Digestion, Inductively Coupled Plasma Method[4] 2) Digestion, Inductively Coupled Plasma/ Mass Spectrometric Method[4]
6	Arsenic	1) Digestion, Inductively Coupled Plasma Method[4] 2) Digestion, Inductively Coupled Plasma/ Mass Spectrometric Method[4]
7	Atrazine	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method[4]
8	Barium	1) Digestion, Inductively Coupled Plasma Method[4] 2) Digestion, Inductively Coupled Plasma/ Mass Spectrometric Method[4]
9	Benz(a)anthracene	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method[4]
10	Benzene	Purge and Trap, Gas Chromatographic/ Mass Spectrometric Method[4]
11	Benzo(b)fluoranthene	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method[4]
12	Benzo(k)fluoranthene	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method[4]
13	Benzoic Acid	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method[4]
14	Benzo(a)pyrene	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method[4]
15	Benzo[g,h,i]perylene	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method[4]
16	Beryllium	1) Digestion, Inductively Coupled Plasma Method[4] 2) Digestion, Inductively Coupled Plasma/ Mass Spectrometric Method[4]
17	Bis(2-chloroethyl)ether	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method[4]

18 Bis(2-ethylhexyl)phthalate...

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
18	Bis(2-ethylhexyl)phthalate	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method[4]
19	Bromodichloromethane	Purge and Trap, Gas Chromatographic/ Mass Spectrometric Method[4]
20	Bromoform	Purge and Trap, Gas Chromatographic/ Mass Spectrometric Method[4]
21	Butanol	Purge and Trap, Gas Chromatographic/ Mass Spectrometric Method[4]
22	Butyl benzyl phthalate	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method[4]
23	Cadmium	1) Digestion, Inductively Coupled Plasma Method[4] 2) Digestion, Inductively Coupled Plasma/ Mass Spectrometric Method[4]
24	Carbazole	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method[4]
25	Carbon disulfide	Purge and Trap, Gas Chromatographic/ Mass Spectrometric Method[4]
26	Carbon tetrachloride	Purge and Trap, Gas Chromatographic/ Mass Spectrometric Method[4]
27	Chlordane	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method[4]
28	p-Chloroaniline	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method[4]
29	Chlorobenzene	Purge and Trap, Gas Chromatographic/ Mass Spectrometric Method[4]
30	Chlorodibromomethane	Purge and Trap, Gas Chromatographic/ Mass Spectrometric Method[4]
31	Chloroform	Purge and Trap, Gas Chromatographic/ Mass Spectrometric Method[4]
32	2-Chlorophenol	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method[4]
33	Chromium	1) Digestion, Inductively Coupled Plasma Method[4] 2) Digestion, Inductively Coupled Plasma/ Mass Spectrometric Method[4]
34	Chromium (III)	1) Digestion, Inductively Coupled Plasma Method; Colorimetric Method; Calculation[4] 2) Digestion, Inductively Coupled Plasma/ Mass Spectrometric Method; Colorimetric Method; Calculation[4]
35	Chromium (VI)	Colorimetric Method[4]

36 Chrysene...

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
36	Chrysene	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method[4]
37	Cyanide	Distillation, Colorimetric Method[4]
38	2,4-D	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method[4]
39	DDD	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method[4]
40	DDE	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method[4]
41	DDT	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method[4]
42	Dibenz(a,h)anthracene	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method[4]
43	Di-n-Butyl Phthalate	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method[4]
44	1,2-Dichlorobenzene	Purge and Trap, Gas Chromatographic/ Mass Spectrometric Method[4]
45	1,3-Dichlorobenzene	Purge and Trap, Gas Chromatographic/ Mass Spectrometric Method[4]
46	1,4-Dichlorobenzene	Purge and Trap, Gas Chromatographic/ Mass Spectrometric Method[4]
47	3,3-Dichlorobenzidine	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method[4]
48	1,1-Dichloroethane	Purge and Trap, Gas Chromatographic/ Mass Spectrometric Method[4]
49	1,2-Dichloroethane	Purge and Trap, Gas Chromatographic/ Mass Spectrometric Method[4]
50	1,1-Dichloroethylene	Purge and Trap, Gas Chromatographic/ Mass Spectrometric Method[4]
51	cis-1,2-Dichloroethylene	Purge and Trap, Gas Chromatographic/ Mass Spectrometric Method[4]
52	trans-1,2-Dichloroethylene	Purge and Trap, Gas Chromatographic/ Mass Spectrometric Method[4]
53	2,4-Dichlorophenol	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method[4]
54	1,2-Dichloropropane	Purge and Trap, Gas Chromatographic/ Mass Spectrometric Method[4]
55	1,3-Dichloropropane	Purge and Trap, Gas Chromatographic/ Mass Spectrometric Method[4]

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
56	1,3-Dichloropropene	Purge and Trap, Gas Chromatographic/ Mass Spectrometric Method[4]
57	Dieldrin	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method[4]
58	Diethyl Phthalate	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method[4]
59	2,4-Dimethylphenol	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method[4]
60	2,4-Dinitrophenol	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method[4]
61	2,4-Dinitrotoluene	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method[4]
62	2,6-Dinitrotoluene	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method[4]
63	Di-n-octyl phthalate	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method[4]
64	Endosulfan	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method[4]
65	Endrin	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method[4]
66	Ethylbenzene	Purge and Trap, Gas Chromatographic/ Mass Spectrometric Method[4]
67	Fluoranthene	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method[4]
68	Fluorene	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method[4]
69	Heptachlor	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method[4]
70	Heptachlor epoxide	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method[4]
71	Hexachlorobenzene	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method[4]
72	Hexachloro-1,3-butadiene	Purge and Trap, Gas Chromatographic/ Mass Spectrometric Method[4]
73	n-Hexane	Purge and Trap, Gas Chromatographic/ Mass Spectrometric Method[4]
74	α-HCH	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method[4]
75	β-HCH	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method[4]

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
76	γ-HCH	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method[4]
77	Hexachlorocyclopentadiene	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method[4]
78	Hexachloroethane	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method[4]
79	Indeno(1,2,3-cd)pyrene	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method[4]
80	Isophorone	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method[4]
81	Lead	1) Digestion, Inductively Coupled Plasma Method[4] 2) Digestion, Inductively Coupled Plasma/ Mass Spectrometric Method[4]
82	Manganese	1) Digestion, Inductively Coupled Plasma Method[4] 2) Digestion, Inductively Coupled Plasma/ Mass Spectrometric Method[4]
83	Mercury	1) Digestion, Cold Vapor Atomic Absorption Spectrometric Method[4] 2) Digestion, Inductively Coupled Plasma/ Mass Spectrometric Method[4]
84	Methanol	Purge and Trap, Gas Chromatographic/ Mass Spectrometric Method[4]
85	Methoxychlor	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method[4]
86	Methyl bromide	Purge and Trap, Gas Chromatographic/ Mass Spectrometric Method[4]
87	Methylene chloride	Purge and Trap, Gas Chromatographic/ Mass Spectrometric Method[4]
88	2-Methylphenol	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method[4]
89	2-Methylnapthalene	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method[4]
90	Methyl tert-butyl Ether	Purge and Trap, Gas Chromatographic/ Mass Spectrometric Method[4]
91	Naphthalene	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method[4]
92	Nickel	1) Digestion, Inductively Coupled Plasma Method[4] 2) Digestion, Inductively Coupled Plasma/ Mass Spectrometric Method[4]
93	Nitrobenzene	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method[4]

94 N-Nitrosodiphenylamine...

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
94	N-Nitrosodiphenylamine	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method[4]
95	N-Nitrosodi-n-Propylamine	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method[4]
96	Polychlorinated Biphenyls - PCB 1016 - PCB 1221 - PCB 1232 - PCB 1242 - PCB 1248 - PCB 1254 - PCB 1260	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method[4]
97	Pentachlorophenol	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method[4]
98	pH	Electrometric Method[4]
99	Phenanthrene	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method[4]
100	Phenol	1) Distillation, Chloroform Extraction Method[4] 2) Distillation, Direct Photometric Method[4] 3) Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method[4]
101	Pyrene	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method[4]
102	Selenium	1) Digestion, Inductively Coupled Plasma Method[4] 2) Digestion, Inductively Coupled Plasma/ Mass Spectrometric Method[4]
103	Silver	1) Digestion, Inductively Coupled Plasma Method[4] 2) Digestion, Inductively Coupled Plasma/ Mass Spectrometric Method[4]
104	Styrene	Purge and Trap, Gas Chromatographic/ Mass Spectrometric Method[4]
105	1,1,2,2-Tetrachloroethane	Purge and Trap, Gas Chromatographic/ Mass Spectrometric Method[4]
106	Tetrachloroethylene	Purge and Trap, Gas Chromatographic/ Mass Spectrometric Method[4]
107	Toluene	Purge and Trap, Gas Chromatographic/ Mass Spectrometric Method[4]
108	Toxaphene	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method[4]
109	TPH (C_5-C_8)	Purge and Trap, Gas Chromatographic/ Mass Spectrometric Method[14,25]

110 TPH ($C_{>8}$-C_{16})...

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
110	TPH ($C_{>8}$-C_{16})	Separatory Funnel Liquid-Liquid Extraction, Gas Chromatographic Method[9,22]
111	TPH ($C_{>16}$-C_{35})	Separatory Funnel Liquid-Liquid Extraction, Gas Chromatographic Method[9,22]
112	1,2,4-Trichlorobenzene	Purge and Trap, Gas Chromatographic/ Mass Spectrometric Method[4]
113	1,1,1-Trichloroethane	Purge and Trap, Gas Chromatographic/ Mass Spectrometric Method[4]
114	1,1,2-Trichloroethane	Purge and Trap, Gas Chromatographic/ Mass Spectrometric Method[4]
115	Trichloroethylene	Purge and Trap, Gas Chromatographic/ Mass Spectrometric Method[4]
116	2,4,5-Trichlorophenol	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method[4]
117	2,4,6-Trichlorophenol	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method[4]
118	1,3,5-Trimethylbenzene	Purge and Trap, Gas Chromatographic/ Mass Spectrometric Method[4]
119	Vanadium	1) Digestion, Inductively Coupled Plasma Method[4] 2) Digestion, Inductively Coupled Plasma/ Mass Spectrometric Method[4]
120	Vinyl acetate	Purge and Trap, Gas Chromatographic/ Mass Spectrometric Method[4]
121	Vinyl chloride	Purge and Trap, Gas Chromatographic/ Mass Spectrometric Method[4]
122	m-Xylene	Purge and Trap, Gas Chromatographic/ Mass Spectrometric Method[4]
123	o-Xylene	Purge and Trap, Gas Chromatographic/ Mass Spectrometric Method[4]
124	p-Xylene	Purge and Trap, Gas Chromatographic/ Mass Spectrometric Method[4]
125	Xylene (Total)	Purge and Trap, Gas Chromatographic/ Mass Spectrometric Method[4]
126	Zinc	1) Digestion, Inductively Coupled Plasma Method[4] 2) Digestion, Inductively Coupled Plasma/ Mass Spectrometric Method[4]

อากาศเสีย...

อากาศเสีย (ปล่องระบาย) จำนวน 28 รายการ

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
1	Antimony	1) Isokinetic Sampling, Digestion, Inductively Coupled Plasma Method[5]
		2) Isokinetic Sampling, Digestion, Inductively Coupled Plasma/Mass Spectrometric Method[5]
2	Arsenic	1) Isokinetic Sampling, Digestion, Inductively Coupled Plasma Method[5]
		2) Isokinetic Sampling, Digestion, Inductively Coupled Plasma/Mass Spectrometric Method[5]
3	Beryllium	1) Isokinetic Sampling, Digestion, Inductively Coupled Plasma Method[5]
		2) Isokinetic Sampling, Digestion, Inductively Coupled Plasma/Mass Spectrometric Method[5]
4	Cadmium	1) Isokinetic Sampling, Digestion, Inductively Coupled Plasma Method[5]
		2) Isokinetic Sampling, Digestion, Inductively Coupled Plasma/Mass Spectrometric Method[5]
5	Carbon Monoxide	1) Instrumental Analyzer Method[5]
		2) Sampling Bag Non-Dispersive Infrared Method[5]
6	Chlorine	1) Absorption Sampling, Ion Chromatographic Method[5]
		2) Isokinetic Sampling, Ion Chromatographic Method [5]
7	Chromium	1) Isokinetic Sampling, Digestion, Inductively Coupled Plasma Method[5]
		2) Isokinetic Sampling, Digestion, Inductively Coupled Plasma/Mass Spectrometric Method[5]
8	Cobalt	1) Isokinetic Sampling, Digestion, Inductively Coupled Plasma Method[5]
		2) Isokinetic Sampling, Digestion, Inductively Coupled Plasma/Mass Spectrometric Method[5]
9	Copper	1) Isokinetic Sampling, Digestion, Inductively Coupled Plasma Method[5]
		2) Isokinetic Sampling, Digestion, Inductively Coupled Plasma/Mass Spectrometric Method[5]
10	Cresol	Adsorption Sampling, Gas Chromatographic Method[5]
11	Dioxins	Isokinetic Sampling[5]
12	Hydrogen Chloride	1) Absorption Sampling, Ion Chromatographic Method[5]
		2) Isokinetic Sampling, Ion Chromatographic Method[5]
13	Hydrogen Fluoride	1) Absorption Sampling, Ion Chromatographic Method[5]
		2) Isokinetic Sampling, Ion Chromatographic Method[5]
14	Hydrogen Sulfide	Absorption Sampling, Iodometric Method[5]

15 Lead...

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
15	Lead	1) Isokinetic Sampling, Digestion, Inductively Coupled Plasma Method[5] 2) Isokinetic Sampling, Digestion, Inductively Coupled Plasma/Mass Spectrometric Method[5]
16	Manganese	1) Isokinetic Sampling, Digestion, Inductively Coupled Plasma Method[5] 2) Isokinetic Sampling, Digestion, Inductively Coupled Plasma/Mass Spectrometric Method[5]
17	Mercury	1) Isokinetic Sampling, Digestion, Cold-Vapor Atomic Absorption Spectrometric Method[5] 2) Isokinetic Sampling, Digestion, Cold-Vapor Atomic Fluorescence Spectrometric Method[5]
18	Nickel	1) Isokinetic Sampling, Digestion, Inductively Coupled Plasma Method[5] 2) Isokinetic Sampling, Digestion, Inductively Coupled Plasma/Mass Spectrometric Method[5]
19	Opacity	Ringelmann's Method[2]
20	Oxides of Nitrogen	1) Absorption Sampling, Phenoldisulfonic Acid Method[5] 2) Absorption Sampling, Alkaline Permanganate/ Colorimetric Method[5] 3) Instrumental Analyzer Method[5]
21	Selenium	1) Isokinetic Sampling, Digestion, Inductively Coupled Plasma Method[5] 2) Isokinetic Sampling, Digestion, Inductively Coupled Plasma/Mass Spectrometric Method[5]
22	Sulfur Dioxide	1) Absorption Sampling, Barium-Thorin Titrimetric Method[5] 2) Instrumental Analyzer Method[5]
23	Sulfuric Acid	Isokinetic Sampling, Barium-Thorin Titrimetric Method[5]
24	Tellurium	1) Isokinetic Sampling, Digestion, Inductively Coupled Plasma Method[5] 2) Isokinetic Sampling, Digestion, Inductively Coupled Plasma/Mass Spectrometric Method[5]
25	Tin	1) Isokinetic Sampling, Digestion, Inductively Coupled Plasma Method[5] 2) Isokinetic Sampling, Digestion, Inductively Coupled Plasma/Mass Spectrometric Method[5]
26	Total Suspended Particulate	1) Isokinetic Sampling, Gravimetric Method[5] 2) Paired Train, Isokinetic Sampling, Gravimetric Method[5]

27 Vanadium...

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
27	Vanadium	1) Isokinetic Sampling, Digestion, Inductively Coupled Plasma Method[5] 2) Isokinetic Sampling, Digestion, Inductively Coupled Plasma/Mass Spectrometric Method[5]
28	Xylene	Adsorption Sampling, Gas Chromatographic Method[5]

<u>สิ่งปฏิกูลหรือวัสดุที่ไม่ใช้แล้ว จำนวน 35 รายการ</u>

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
1	Aldrin	1) Waste Extraction, Separatory Funnel Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method[1,9,26] 2) Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method[10,26] 3) Automated Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method[11,26]
2	Antimony	1) Waste Extraction, Digestion, Inductively Coupled Plasma Method[1,6,16] 2) Waste Extraction, Digestion, Inductively Coupled Plasma/Mass Spectrometric Method[1,6,17] 3) Digestion, Inductively Coupled Plasma Method[7,16] 4) Digestion, Inductively Coupled Plasma/ Mass Spectrometric Method[7,17]
3	Arsenic	1) Waste Extraction, Digestion, Inductively Coupled Plasma Method[1,6,16] 2) Waste Extraction, Digestion, Inductively Coupled Plasma/Mass Spectrometric Method[1,6,17] 3) Digestion, Inductively Coupled Plasma Method[7,16] 4) Digestion, Inductively Coupled Plasma/ Mass Spectrometric Method[7,17]
4	Barium	1) Waste Extraction, Digestion, Inductively Coupled Plasma Method[1,6,16] 2) Waste Extraction, Digestion, Inductively Coupled Plasma/Mass Spectrometric Method[1,6,17] 3) Digestion, Inductively Coupled Plasma Method[7,16] 4) Digestion, Inductively Coupled Plasma/ Mass Spectrometric Method[7,17]

5 Beryllium...

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
5	Beryllium	1) Waste Extraction, Digestion, Inductively Coupled Plasma Method[1,6,16] 2) Waste Extraction, Digestion, Inductively Coupled Plasma/Mass Spectrometric Method[1,6,17] 3) Digestion, Inductively Coupled Plasma Method[7,16] 4) Digestion, Inductively Coupled Plasma/ Mass Spectrometric Method[7,17]
6	Cadmium	1) Waste Extraction, Digestion, Inductively Coupled Plasma Method[1,6,16] 2) Waste Extraction, Digestion, Inductively Coupled Plasma/Mass Spectrometric Method[1,6,17] 3) Digestion, Inductively Coupled Plasma Method[7,16] 4) Digestion, Inductively Coupled Plasma/ Mass Spectrometric Method[7,17]
7	Chlordane	1) Waste Extraction, Separatory Funnel Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method[1,9,26] 2) Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method[10,26] 3) Automated Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method[11,26]
8	Chromium	1) Waste Extraction, Digestion, Inductively Coupled Plasma Method[1,6,16] 2) Waste Extraction, Digestion, Inductively Coupled Plasma/Mass Spectrometric Method[1,6,17] 3) Digestion, Inductively Coupled Plasma Method[7,16] 4) Digestion, Inductively Coupled Plasma/ Mass Spectrometric Method[7,17]
9	Chromium (III)	1) Waste Extraction, Digestion, Inductively Coupled Plasma Method; Waste Extraction, Colorimetric Method; Calculation Method[1,6,16,19] 2) Waste Extraction, Digestion, Inductively Coupled Plasma/Mass Spectrometric Method; Waste Extraction, Colorimetric Method; Calculation Method[1,6,17,19] 3) Digestion, Inductively Coupled Plasma Method; Alkaline Digestion, Colorimetric Method; Calculation Method[7,8,16,19] 4) Digestion, Inductively Coupled Plasma/ Mass Spectrometric Method; Alkaline Digestion, Colorimetric Method; Calculation Method[7,8, 17,19]

10 Chromium (VI)...

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
10	Chromium (VI)	1) Waste Extraction, Colorimetric Method[1,6,19] 2) Alkaline Digestion, Colorimetric Method[8,19]
11	Cobalt	1) Waste Extraction, Digestion, Inductively Coupled Plasma Method[1,6,16] 2) Waste Extraction, Digestion, Inductively Coupled Plasma/Mass Spectrometric Method[1,6,17] 3) Digestion, Inductively Coupled Plasma Method[7,16] 4) Digestion, Inductively Coupled Plasma/ Mass Spectrometric Method[7,17]
12	Copper	1) Waste Extraction, Digestion, Inductively Coupled Plasma Method[1,6,16] 2) Waste Extraction, Digestion, Inductively Coupled Plasma/Mass Spectrometric Method[1,6,17] 3) Digestion, Inductively Coupled Plasma Method[7,16] 4) Digestion, Inductively Coupled Plasma/ Mass Spectrometric Method[7,17]
13	2,4-D	1) Waste Extraction, Separatory Funnel Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method[1,9,26] 2) Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method[10,26] 3) Automated Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method[11,26]
14	DDD	1) Waste Extraction, Separatory Funnel Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method[1,9,26] 2) Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method[10,26] 3) Automated Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method[11,26]
15	DDE	1) Waste Extraction, Separatory Funnel Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method[1,9,26] 2) Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method[10,26] 3) Automated Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method[11,26]
16	DDT	1) Waste Extraction, Separatory Funnel Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method[1,9,26]

2) Soxhlet...

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
		2) Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method[10,26]
		3) Automated Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method[11,26]
17	Dieldrin	1) Waste Extraction, Separatory Funnel Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method[1,9,26]
		2) Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method[10,26]
		3) Automated Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method[11,26]
18	Endrin	1) Waste Extraction, Separatory Funnel Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method[1,9,26]
		2) Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method[10,26]
		3) Automated Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method[11,26]
19	Heptachlor	1) Waste Extraction, Separatory Funnel Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method[1,9,26]
		2) Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method[10,26]
		3) Automated Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method[11,26]
20	Lead	1) Waste Extraction, Digestion, Inductively Coupled Plasma Method[1,6,16]
		2) Waste Extraction, Digestion, Inductively Coupled Plasma/Mass Spectrometric Method[1,6,17]
		3) Digestion, Inductively Coupled Plasma Method[7,16]
		4) Digestion, Inductively Coupled Plasma/ Mass Spectrometric Method[7,17]
21	Lindane	1) Waste Extraction, Separatory Funnel Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method[1,9,26]
		2) Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method[10,26]
		3) Automated Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method[11,26]

22 Mercury...

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
22	Mercury	1) Waste Extraction, Digestion, Cold-Vapor Atomic Absorption Spectrometric Method[1,6,20] 2) Waste Extraction, Digestion, Cold-Vapor Atomic Fluorescence Spectrometric Method[1,6,30] 3) Digestion, Cold-Vapor Atomic Absorption Spectrometric Method[20] 4) Digestion, Cold-Vapor Atomic Fluorescence Spectrometric Method[30] 5) Thermal Decomposition Amalgamation and Atomic Absorption Spectrometric Method[21]
23	Methoxychlor	1) Waste Extraction, Separatory Funnel Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method[1,9,26] 2) Soxhlet Extraction, Gas Chromatographic / Mass Spectrometric Method[10,26] 3) Automated Soxhlet Extraction, Gas Chromatographic /Mass Spectrometric Method[11,26]
24	Mirex	1) Waste Extraction, Separatory Funnel Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method[1,9,26] 2) Soxhlet Extraction, Gas Chromatographic / Mass Spectrometric Method[10,26] 3) Automated Soxhlet Extraction, Gas Chromatographic /Mass Spectrometric Method[11,26]
25	Molybdenum	1) Waste Extraction, Digestion, Inductively Coupled Plasma Method[1,6,16] 2) Waste Extraction, Digestion, Inductively Coupled Plasma/Mass Spectrometric Method[1,6,17] 3) Digestion, Inductively Coupled Plasma Method[7,16] 4) Digestion, Inductively Coupled Plasma/ Mass Spectrometric Method[7,17]
26	Nickel	1) Waste Extraction, Digestion, Inductively Coupled Plasma Method[1,6,16] 2) Waste Extraction, Digestion, Inductively Coupled Plasma/Mass Spectrometric Method[1,6,17] 3) Digestion, Inductively Coupled Plasma Method[7,16] 4) Digestion, Inductively Coupled Plasma/ Mass Spectrometric Method[7,17]
27	Polychlorinated biphenyls (PCBs) - Aroclor 1016 - Aroclor 1221 - Aroclor 1232 - Aroclor 1242 - Aroclor 1248 - Aroclor 1254 - Aroclor 1260	1) Waste Extraction, Separatory Funnel Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method[1,9,26] 2) Soxhlet Extraction, Gas Chromatographic Method[10,26] 3) Automated Soxhlet Extraction, Gas Chromatographic Method[11,26]

- 2-Chlorobiphenyl...

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
	- 2-Chlorobiphenyl - 2,3-Dichlorobiphenyl - 2,2',5-Trichlorobiphenyl - 2,4',5-Trichlorobiphenyl - 2,2',3,5'-Tetrachlorobiphenyl - 2,2',5,5'-Tetrachlorobiphenyl - 2,3',4,4'-Tetrachlorobiphenyl - 2,2',3,4,5'-Pentachlorobiphenyl - 2,2',4,5,5'-Pentachlorobiphenyl - 2,3,3',4',6-Pentachlorobiphenyl - 2,2',3,4,4',5'-Hexachlorobiphenyl - 2,2',3,4,5,5'-Hexachlorobiphenyl - 2,2',3,5,5',6-Hexachlorobiphenyl - 2,2',4,4',5,5'-Hexachlorobiphenyl - 2,2',3,3',4,4',5-Heptachlorobiphenyl - 2,2',3,4,4',5,5'-Heptachlorobiphenyl - 2,2',3,4,4',5',6-Heptachlorobiphenyl - 2,2',3,4',5,5',6-Heptachlorobiphenyl - 2,2',3,3',4,4',5,5',6-Nonachlorobiphenyl	
28	Pentachlorophenol	1) Waste Extraction, Separatory Funnel Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method[1,9,26] 2) Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method[10,26] 3) Automated Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method[11,26]
29	pH	Electrometric Method[23,24]
30	Selenium	1) Waste Extraction, Digestion, Inductively Coupled Plasma Method[1,6,16] 2) Waste Extraction, Digestion, Inductively Coupled Plasma/Mass Spectrometric Method[1,6,17] 3) Digestion, Inductively Coupled Plasma Method[7,16] 4) Digestion, Inductively Coupled Plasma/ Mass Spectrometric Method[7,17]

31 Silver...

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
31	Silver	1) Waste Extraction, Digestion, Inductively Coupled Plasma Method[1,6,16] 2) Waste Extraction, Digestion, Inductively Coupled Plasma/Mass Spectrometric Method[1,6,17] 3) Digestion, Inductively Coupled Plasma Method[7,16] 4) Digestion, Inductively Coupled Plasma/ Mass Spectrometric Method[7,17]
32	Thallium	1) Waste Extraction, Digestion, Inductively Coupled Plasma Method[1,6,16] 2) Waste Extraction, Digestion, Inductively Coupled Plasma/Mass Spectrometric Method[1,6,17] 3) Digestion, Inductively Coupled Plasma Method[7,16] 4) Digestion, Inductively Coupled Plasma/ Mass Spectrometric Method[7,17]
33	Toxaphene	1) Waste Extraction, Separatory Funnel Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method[1,9,26] 2) Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method[10,26] 3) Automated Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method[11,26]
34	Vanadium	1) Waste Extraction, Digestion, Inductively Coupled Plasma Method[1,6,16] 2) Waste Extraction, Digestion, Inductively Coupled Plasma/Mass Spectrometric Method[1,6,17] 3) Digestion, Inductively Coupled Plasma Method[7,16] 4) Digestion, Inductively Coupled Plasma/ Mass Spectrometric Method[7,17]
35	Zinc	1) Waste Extraction, Digestion, Inductively Coupled Plasma Method[1,6,16] 2) Waste Extraction, Digestion, Inductively Coupled Plasma/Mass Spectrometric Method[1,6,17] 3) Digestion, Inductively Coupled Plasma Method[7,16] 4) Digestion, Inductively Coupled Plasma/ Mass Spectrometric Method[7,17]

ดิน จำนวน 125 รายการ

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
1	Acenaphthene	1) Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method[10,26] 2) Automated Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method[11,26]
2	Acetone	1)Purge and Trap, Gas Chromatographic/ Mass Spectrometric Method[15,25] 2) Equilibrium Headspace, Gas Chromatographic/ Mass Spectrometric Method[13]
3	Aldrin	1) Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method[10,26] 2) Automated Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method[11,26]
4	Anthracene	1) Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method[10,26] 2) Automated Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method[11,26]
5	Antimony	1) Digestion, Inductively Coupled Plasma Method[7,16] 2) Digestion, Inductively Coupled Plasma/ Mass Spectrometric Method[7,17]
6	Arsenic	1) Digestion, Inductively Coupled Plasma Method[7,16] 2) Digestion, Inductively Coupled Plasma/ Mass Spectrometric Method[7,17]
7	Atrazine	1) Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method[10,26] 2) Automated Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method[11,26]
8	Barium	1) Digestion, Inductively Coupled Plasma Method[7,16] 2) Digestion, Inductively Coupled Plasma/ Mass Spectrometric Method[7,17]
9	Benz(a)anthracene	1) Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method[10,26] 2) Automated Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method[11,26]
10	Benzene	Purge and Trap, Gas Chromatographic/ Mass Spectrometric Method[15,25]

11 Benzo(b)fluoranthene

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
11	Benzo(b)fluoranthene	1) Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method[10,26] 2) Automated Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method[11,26]
12	Benzo(k)fluoranthene	1) Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method[10,26] 2) Automated Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method[11,26]
13	Benzoic acid	1) Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method[10,26] 2) Automated Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method[11,26]
14	Benzo(a)pyrene	1) Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method[10,26] 2) Automated Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method[11,26]
15	Benzo(g,h,i)perylene	1) Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method[10,26] 2) Automated Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method[11,26]
16	Beryllium	1) Digestion, Inductively Coupled Plasma Method[7,16] 2) Digestion, Inductively Coupled Plasma/ Mass Spectrometric Method[7,17]
17	Bis(2-chloroethyl)ether	1) Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method[10,26] 2) Automated Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method[11,26]
18	Bis(2-ethylhexyl)phthalate	1) Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method[10,26] 2) Automated Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method[11,26]
19	Bromodichloromethane	Purge and Trap, Gas Chromatographic/ Mass Spectrometric Method[15,25]
20	Bromoform	Purge and Trap, Gas Chromatographic/ Mass Spectrometric Method[15,25]
21	Butanol	Equilibrium Headspace, Gas Chromatographic/ Mass Spectrometric Method[13,25]
22	Butyl Benzyl Phthalate	1) Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method[10,26] 2) Automated Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method[11,26]

23 Cadmium...

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
23	Cadmium	1) Digestion, Inductively Coupled Plasma Method[7,16] 2) Digestion, Inductively Coupled Plasma/ Mass Spectrometric Method[7,17]
24	Carbazole	1) Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method[10,26] 2) Automated Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method[11,26]
25	Carbon Disulfide	Purge and Trap, Gas Chromatographic/ Mass Spectrometric Method[15,25]
26	Carbon tetrachloride	Purge and Trap, Gas Chromatographic/ Mass Spectrometric Method[15,25]
27	Chlordane	1) Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method[10,26] 2) Automated Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method[11,26]
28	p-Chloroaniline	1) Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method[10,26] 2) Automated Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method[11,26]
29	Chlorobenzene	Purge and Trap, Gas Chromatographic/ Mass Spectrometric Method[15,25]
30	Chlorodibromomethane	Purge and Trap, Gas Chromatographic/ Mass Spectrometric Method[15,25]
31	Chloroform	Purge and Trap, Gas Chromatographic/ Mass Spectrometric Method[15,25]
32	2-Chlorophenol	1) Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method[10,26] 2) Automated Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method[11,26]
33	Chromium	1) Digestion, Inductively Coupled Plasma Method[7,16] 2) Digestion, Inductively Coupled Plasma/ Mass Spectrometric Method[7,17]
34	Chromium (III)	1) Digestion, Inductively Coupled Plasma Method; Alkaline Digestion, Colorimetric Method; Calculation Method[7,8,16,19] 2) Digestion, Inductively Coupled Plasma/ Mass Spectrometric Method; Alkaline Digestion, Colorimetric Method; Calculation Method[7,8,17,19]
35	Chromium (VI)	Alkaline Digestion, Colorimetric Method[8,19]

36 Chrysene...

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
36	Chrysene	1) Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method[10,26] 2) Automated Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method[11,26]
37	Cyanide	Extraction, Distillation, Colorimetric Method[27,28,29]
38	2,4-D	1) Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method[10,26] 2) Automated Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method[11,26]
39	DDD	1) Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method[10,26] 2) Automated Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method[11,26]
40	DDE	1) Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method[10,26] 2) Automated Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method[11,26]
41	DDT	1) Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method[10,26] 2) Automated Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method[11,26]
42	Dibenz(a,h)anthracene	1) Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method[10,26] 2) Automated Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method[11,26]
43	Di-n-Butyl Phthalate	1) Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method[10,26] 2) Automated Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method[11,26]
44	1,2-Dichlorobenzene	Purge and Trap, Gas Chromatographic/ Mass Spectrometric Method[15,25]
45	1,3-Dichlorobenzene	Purge and Trap, Gas Chromatographic/ Mass Spectrometric Method[15,25]
46	1,4-Dichlorobenzene	Purge and Trap, Gas Chromatographic/ Mass Spectrometric Method[15,25]
47	3,3-Dichlorobenzidine	1) Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method[10,26] 2) Automated Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method[11,26]
48	1,1-Dichloroethane	Purge and Trap, Gas Chromatographic/ Mass Spectrometric Method[15,25]

49 1,2-Dichloroethane...

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
49	1,2-Dichloroethane	Purge and Trap, Gas Chromatographic/ Mass Spectrometric Method[15,25]
50	1,1-Dichloroethylene	Purge and Trap, Gas Chromatographic/ Mass Spectrometric Method[15,25]
51	cis-1,2-Dichloroethylene	Purge and Trap, Gas Chromatographic/ Mass Spectrometric Method[15,25]
52	trans-1,2-Dichloroethylene	Purge and Trap, Gas Chromatographic/ Mass Spectrometric Method[15,25]
53	2,4-Dichlorophenol	1) Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method[10,26] 2) Automated Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method[11,26]
54	1,2-Dichloropropane	Purge and Trap, Gas Chromatographic/ Mass Spectrometric Method[15,25]
55	1,3-Dichloropropane	Purge and Trap, Gas Chromatographic/ Mass Spectrometric Method[15,25]
56	1,3-Dichloropropene	Purge and Trap, Gas Chromatographic/ Mass Spectrometric Method[15,25]
57	Dieldrin	1) Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method[10,26] 2) Automated Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method[11,26]
58	Diethyl Phthalate	1) Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method[10,26] 2) Automated Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method[11,26]
59	2,4-Dimethylphenol	1) Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method[10,26] 2) Automated Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method[11,26]
60	2,4-Dinitrophenol	1) Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method[10,26] 2) Automated Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method[11,26]
61	2,4-Dinitrotoluene	1) Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method[10,26] 2) Automated Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method[11,26]
62	2,6-Dinitrotoluene	1) Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method[10,26] 2) Automated Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method[11,26]

63 Di-n-Octyl Phthalate...

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
63	Di-n-Octyl Phthalate	1) Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method[10,26] 2) Automated Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method[11,26]
64	Endosulfan	1) Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method[10,26] 2) Automated Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method[11,26]
65	Endrin	1) Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method[10,26] 2) Automated Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method[11,26]
66	Ethylbenzene	Purge and Trap, Gas Chromatographic/ Mass Spectrometric Method[15,25]
67	Fluoranthene	1) Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method[10,26] 2) Automated Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method[11,26]
68	Fluorene	1) Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method[10,26] 2) Automated Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method[11,26]
69	Heptachlor	1) Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method[10,26] 2) Automated Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method[11,26]
70	Heptachlor epoxide	1) Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method[10,26] 2) Automated Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method[11,26]
71	Hexachlorobenzene	1) Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method[10,26] 2) Automated Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method[11,26]
72	Hexachloro-1,3-butadiene	Purge and Trap, Gas Chromatographic/ Mass Spectrometric Method[15,25]
73	n-Hexane	1) Purge and Trap, Gas Chromatographic/ Mass Spectrometric Method[15,25] 2) Equilibrium Headspace, Gas Chromatographic/ Mass Spectrometric Method[13]

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
74	α-HCH	1) Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method[10,26] 2) Automated Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method[11,26]
75	β-HCH	1) Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method[10,26] 2) Automated Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method[11,26]
76	γ-HCH	1) Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method[10,26] 2) Automated Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method[11,26]
77	Hexachlorocyclopentadiene	1) Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method[10,26] 2) Automated Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method[11,26]
78	Hexachloroethane	1) Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method[10,26] 2) Automated Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method[11,26]
79	Indeno(1,2,3-cd)pyrene	1) Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method[10,26] 2) Automated Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method[11,26]
80	Isophorone	1) Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method[10,26] 2) Automated Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method[11,26]
81	Lead	1) Digestion, Inductively Coupled Plasma Method[7,16] 2) Digestion, Inductively Coupled Plasma/ Mass Spectrometric Method[7,17]
82	Manganese	1) Digestion, Inductively Coupled Plasma Method[7,16] 2) Digestion, Inductively Coupled Plasma/ Mass Spectrometric Method[7,17]
83	Mercury	1) Digestion, Cold-Vapor Atomic Absorption Spectrometric Method[20] 2) Thermal Decomposition, Amalgamation, and Atomic Absorption Spectrophotometry[21] 3) Digestion, Cold-Vapor Atomic Fluorescence Spectrometric Method[30]

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
84	Methanol	1) Purge and Trap, Gas Chromatographic/ Mass Spectrometric Method[15,25] 2) Equilibrium Headspace, Gas Chromatographic/ Mass Spectrometric Method[13,25]
85	Methoxychlor	1) Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method[10,26] 2) Automated Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method[11,26]
86	Methyl Bromide	Purge and Trap, Gas Chromatographic/ Mass Spectrometric Method[15,25]
87	Methylene Chloride	Purge and Trap, Gas Chromatographic/ Mass Spectrometric Method[15,25]
88	2-methylphenol	1) Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method[10,26] 2) Automated Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method[11,26]
89	2-Methylnaphthalene	1) Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method[10,26] 2) Automated Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method[11,26]
90	Methyl tert-Butyl Ether	Purge and Trap, Gas Chromatographic/ Mass Spectrometric Method[15,25]
91	Naphthalene	1) Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method[10,26] 2) Automated Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method[11,26]
92	Nickel	1) Digestion, Inductively Coupled Plasma Method[7,16] 2) Digestion, Inductively Coupled Plasma/ Mass Spectrometric Method[7,17]
93	Nitrobenzene	1) Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method[10,26] 2) Automated Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method[11,26
94	N-Nitrosodiphenylamine	1) Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method[10,26] 2) Automated Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method[11,26]
95	N-Nitrosodi-n-propylamine	1) Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method[10,26] 2) Automated Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method[11,26]

96 Polychlorinated biphenyls (PCBs)

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
96	Polychlorinated biphenyls (PCBs) - Aroclor 1016 - Aroclor 1221 - Aroclor 1232 - Aroclor 1242 - Aroclor 1248 - Aroclor 1254 - Aroclor 1260 - 2-Chlorobiphenyl - 2,2',3,5'-Tetrachlorobiphenyl - 2,2',5,5'-Tetrachlorobiphenyl - 2,3',4,4'-Tetrachlorobiphenyl - 2,2',3,4,5'-Pentachlorobiphenyl - 2,2',4,5,5'-Pentachlorobiphenyl - 2,3,3',4',6-Pentachlorobiphenyl - 2,2',3,4,4',5'-Hexachlorobiphenyl - 2,2',3,4,5,5'-Hexachlorobiphenyl - 2,2',3,5,5',6-Hexachlorobiphenyl - 2,2',4,4',5,5'-Hexachlorobiphenyl - 2,2',3,3',4,4',5-Heptachlorobiphenyl - 2,2',3,4,4',5,5'-Heptachlorobiphenyl - 2,2',3,4,4',5',6-Heptachlorobiphenyl - 2,2',3,4',5,5',6-Heptachlorobiphenyl - 2,2',3,3',4,4',5,5',6-Nonachlorobiphenyl	1) Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method[10,26] 2) Automated Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method[11,26]
97	Pentachlorophenol	1) Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method[10,26] 2) Automated Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method[11,26]
98	Phenanthrene	1) Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method[10,26] 2) Automated Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method[11,26]

99 Phenol...

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
99	Phenol	1) Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method[10,26] 2) Automated Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method[11,26]
100	Pyrene	1) Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method[10,26] 2) Automated Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method[11,26]
101	Selenium	1) Digestion, Inductively Coupled Plasma Method[7,16] 2) Digestion, Inductively Coupled Plasma/ Mass Spectrometric Method[7,17]
102	Silver	1) Digestion, Inductively Coupled Plasma Method[7,16] 2) Digestion, Inductively Coupled Plasma/ Mass Spectrometric Method[7,17]
103	Styrene	Purge and Trap, Gas Chromatographic/ Mass Spectrometric Method[15,25]
104	1,1,2,2-Tetrachloroethane	Purge and Trap, Gas Chromatographic/ Mass Spectrometric Method[15,25]
105	Tetrachloroethylene	Purge and Trap, Gas Chromatographic/ Mass Spectrometric Method[15,25]
106	Toluene	Purge and Trap, Gas Chromatographic/ Mass Spectrometric Method[15,25]
107	Toxaphene	1) Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method[10,26] 2) Automated Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method[11,26]
108	TPH (C_5–C_8)	Purge and Trap, Gas Chromatographic/ Mass Spectrometric Method[15,25]
109	TPH ($C_{>8}$– C_{16})	1) Automate Extraction, Gas Chromatographic Method[11,22] 2) Solvent Extraction, Gas Chromatographic Method[12,22] 3) Ultrasonic Extraction, Gas Chromatographic Method[22,31
110	TPH ($C_{>16}$ – C_{35})	1) Automate Extraction, Gas Chromatographic Method[11,22] 2) Solvent Extraction, Gas Chromatographic Method[12,22] 3) Ultrasonic Extraction, Gas Chromatographic Method[22,31]
111	1,2,4-Trichlorobenzene	Purge and Trap, Gas Chromatographic/ Mass Spectrometric Method[15,25]
112	1,1,1-Trichloroethane	Purge and Trap, Gas Chromatographic/ Mass Spectrometric Method[15,25]
113	1,1,2-Trichloroethane	Purge and Trap, Gas Chromatographic/ Mass Spectrometric Method[15,25]
114	Trichloroethylene	Purge and Trap, Gas Chromatographic/ Mass Spectrometric Method[15,25]

115 2,4,5-Trichlorophenol...

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
115	2,4,5-Trichlorophenol	1) Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method[10,26] 2) Automated Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method[11,26]
116	2,4,6-Trichlorophenol	1) Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method[10,26] 2) Automated Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method[11,26]
117	1,3,5-Trimethylbenzene	Purge and Trap, Gas Chromatographic/ Mass Spectrometric Method[15,25]
118	Vanadium	1) Digestion, Inductively Coupled Plasma Method[7,16] 2) Digestion, Inductively Coupled Plasma/ Mass Spectrometric Method[7,17]
119	Vinyl Acetate	Purge and Trap, Gas Chromatographic/ Mass Spectrometric Method[15,25]
120	Vinyl Chloride	Purge and Trap, Gas Chromatographic/ Mass Spectrometric Method[15,25]
121	m-Xylene	Purge and Trap, Gas Chromatographic/ Mass Spectrometric Method[15,25]
122	o-Xylene	Purge and Trap, Gas Chromatographic/ Mass Spectrometric Method[15,25]
123	p-Xylene	Purge and Trap, Gas Chromatographic/ Mass Spectrometric Method[15,25]
124	Xylene (Total)	Purge and Trap, Gas Chromatographic/ Mass Spectrometric Method[15,25]
125	Zinc	1) Digestion, Inductively Coupled Plasma Method[7,16] 2) Digestion, Inductively Coupled Plasma/ Mass Spectrometric Method[7,17]

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ที่ อก ๐๓๑๐(๑)/ ๔๑๒๑

กรมโรงงานอุตสาหกรรม
ถนนพระรามที่ ๖ แขวงทุ่งพญาไท
เขตราชเทวี กรุงเทพฯ ๑๐๔๐๐

๒๕ เมษายน ๒๕๖๗

เรื่อง เปลี่ยนแปลงบุคลากรของห้องปฏิบัติการวิเคราะห์

เรียน กรรมการผู้จัดการ บริษัท เอแอลเอส แลบอราทอรี กรุ๊ป (ประเทศไทย) จำกัด

อ้างถึง คำขอขึ้นทะเบียน/ต่ออายุ/เปลี่ยนแปลงบุคลากร และชนิดสารมลพิษของห้องปฏิบัติการวิเคราะห์เอกชน ลงวันที่ ๒๙ มีนาคม ๒๕๖๗

ตามคำขอที่อ้างถึง บริษัท เอแอลเอส แลบอราทอรี กรุ๊ป (ประเทศไทย) จำกัด ห้องปฏิบัติการวิเคราะห์เอกชน เลขทะเบียน ว-๒๐๔ สถานที่ตั้งเลขที่ ๑๐๔ ซอยพัฒนาการ ๔๐ ถนนพัฒนาการ แขวงพัฒนาการ เขตสวนหลวง กรุงเทพมหานคร ขอเปลี่ยนแปลงบุคลากร ความละเอียดแจ้งแล้ว นั้น

กรมโรงงานอุตสาหกรรมพิจารณาแล้ว มีความเห็นดังนี้

๑. ให้ยกเลิกเจ้าหน้าที่ประจำห้องปฏิบัติการวิเคราะห์ จำนวน ๓ ราย

๑) นางสาวพรรณธิดา พุ่มคง	ทะเบียนเลขที่ ว-๒๐๔-จ-๐๐๖๕
๒) นายกำชัย สุทธะ	ทะเบียนเลขที่ ว-๒๐๔-จ-๐๑๒๑
๓) นางสาวศุภรดา ปั้นมยุรา	ทะเบียนเลขที่ ว-๒๐๔-จ-๐๑๓๘

๒. ให้เพิ่มเจ้าหน้าที่ห้องปฏิบัติการวิเคราะห์เอกชน จำนวน ๑๒ ราย

๑) นางสาวฐานิดา กลิ่นเขียว	ทะเบียนเลขที่ ว-๒๐๔-จ-๐๑๘๒
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๔) นายอำนาจ วงษาเคน	ทะเบียนเลขที่ ว-๒๐๔-จ-๐๑๘๕
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๗) นายวัชรินทร์ ผ่องสามสวน	ทะเบียนเลขที่ ว-๒๐๔-จ-๐๑๘๘
๘) นายณัฐพงศ์ โสภา	ทะเบียนเลขที่ ว-๒๐๔-จ-๐๑๘๙
๙) นายศักรินทร์ ปานเพ็ง	ทะเบียนเลขที่ ว-๒๐๔-จ-๐๑๙๐
๑๐) นายณัฐพล ชุ่มชื่น	ทะเบียนเลขที่ ว-๒๐๔-จ-๐๑๙๑
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อนึ่ง หนังสือฉบับนี้...

อนึ่ง หนังสือฉบับนี้จะหมดอายุพร้อมหนังสือต่ออายุรับขึ้นทะเบียนห้องปฏิบัติการวิเคราะห์เอกชน ในวันที่ ๒ กันยายน ๒๕๖๙

จึงเรียนมาเพื่อทราบ

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เขตราชเทวี กรุงเทพฯ ๑๐๔๐๐

๑๘ ธันวาคม ๒๕๖๗

เรื่อง ยกเลิกบุคลากรของห้องปฏิบัติการวิเคราะห์

เรียน กรรมการผู้จัดการ บริษัท เอแอลเอส แลบอราทอรี กรุ๊ป (ประเทศไทย) จำกัด

อ้างถึง คำขอขึ้นทะเบียน/ต่ออายุ/เปลี่ยนแปลงบุคลากร และชนิดสารมลพิษของห้องปฏิบัติการวิเคราะห์เอกชน ลงวันที่ ๒ ธันวาคม ๒๕๖๗

ตามคำขอที่อ้างถึง บริษัท เอแอลเอส แลบอราทอรี กรุ๊ป (ประเทศไทย) จำกัด ห้องปฏิบัติการวิเคราะห์เอกชน เลขทะเบียน ว-๒๐๔ สถานที่ตั้งเลขที่ ๑๐๔ ซอยพัฒนาการ ๔๐ ถนนพัฒนาการ แขวงพัฒนาการ เขตสวนหลวง กรุงเทพมหานคร ขอยกเลิกบุคลากร ความละเอียดแจ้งแล้ว นั้น

กรมโรงงานอุตสาหกรรมพิจารณาแล้ว ให้ยกเลิกเจ้าหน้าที่ประจำห้องปฏิบัติการวิเคราะห์ จำนวน ๘ ราย ได้แก่

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๓) นายพีรพัฒน์ ก่ำคำ	ทะเบียนเลขที่ ว-๒๐๔-จ-๐๑๐๘
๔) นางสาวอรยา ค้าคล่อง	ทะเบียนเลขที่ ว-๒๐๔-จ-๐๑๓๔
๕) นายกิตติพงศ์ แซ่ลี้	ทะเบียนเลขที่ ว-๒๐๔-จ-๐๑๔๔
๖) นายจิรเมธ ประเสริฐสิริพงศ์	ทะเบียนเลขที่ ว-๒๐๔-จ-๐๑๖๐
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ถนนพระรามที่ ๖ แขวงทุ่งพญาไท
เขตราชเทวี กรุงเทพฯ ๑๐๔๐๐

๑๐ เมษายน ๒๕๖๘

เรื่อง ยกเลิกบุคลากรของห้องปฏิบัติการวิเคราะห์

เรียน กรรมการผู้จัดการ บริษัท เอแอลเอส แลบอราทอรี กรุ๊ป (ประเทศไทย) จำกัด

อ้างถึง คำขอขึ้นทะเบียน/ต่ออายุ/เปลี่ยนแปลงบุคลากร และชนิดสารมลพิษของห้องปฏิบัติการวิเคราะห์เอกชน ลงวันที่ ๒ เมษายน ๒๕๖๘

ตามคำขอที่อ้างถึง บริษัท เอแอลเอส แลบอราทอรี กรุ๊ป (ประเทศไทย) จำกัด ห้องปฏิบัติการวิเคราะห์เอกชน เลขทะเบียน ว-๒๐๔ สถานที่ตั้งเลขที่ ๑๐๔ ซอยพัฒนาการ ๔๐ ถนนพัฒนาการ แขวงพัฒนาการ เขตสวนหลวง กรุงเทพมหานคร ขอยกเลิกบุคลากร ความละเอียดแจ้งแล้ว นั้น

กรมโรงงานอุตสาหกรรมพิจารณาแล้ว ให้ยกเลิกเจ้าหน้าที่ประจำห้องปฏิบัติการวิเคราะห์ จำนวน ๒ ราย ได้แก่

๑) นายธิติพงศ์ บัวแดง	ทะเบียนเลขที่ ว-๒๐๔-จ-๐๑๐๒
๒) นายมงคล ผลาทิพย์	ทะเบียนเลขที่ ว-๒๐๔-จ-๐๑๑๐

จึงเรียนมาเพื่อทราบ

ขอแสดงความนับถือ

(นายธีรทัศน์ อิศรางกูร ณ อยุธยา)
รองอธิบดี ปฏิบัติราชการแทน
อธิบดีกรมโรงงานอุตสาหกรรม

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โทรสาร ๐ ๒๔๓๐ ๖๓๑๒ ต่อ ๒๑๙๙
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ที่ อก ๐๓๑๐(๑)/ ๔๖๗๓

กรมโรงงานอุตสาหกรรม
ถนนพระรามที่ ๖ แขวงทุ่งพญาไท
เขตราชเทวี กรุงเทพฯ ๑๐๔๐๐

๐๕ มิถุนายน ๒๕๖๘

เรื่อง เปลี่ยนแปลงบุคลากรของห้องปฏิบัติการวิเคราะห์

เรียน กรรมการผู้จัดการ บริษัท เอแอลเอส แลบอราทอรี กรุ๊ป (ประเทศไทย) จำกัด

อ้างถึง คำขอขึ้นทะเบียน/ต่ออายุ/เปลี่ยนแปลงบุคลากร และชนิดสารมลพิษของห้องปฏิบัติการวิเคราะห์เอกชน ลงวันที่ ๗ พฤษภาคม ๒๕๖๘

ตามคำขอที่อ้างถึง บริษัท เอแอลเอส แลบอราทอรี กรุ๊ป (ประเทศไทย) จำกัด ห้องปฏิบัติการวิเคราะห์เอกชน เลขทะเบียน ว-๒๐๔ สถานที่ตั้งเลขที่ ๑๐๔ ซอยพัฒนาการ ๔๐ ถนนพัฒนาการ แขวงพัฒนาการ เขตสวนหลวง กรุงเทพมหานคร ขอเปลี่ยนแปลงบุคลากร ความละเอียดแจ้งแล้ว นั้น

กรมโรงงานอุตสาหกรรมพิจารณาแล้ว ให้เพิ่มเจ้าหน้าที่ห้องปฏิบัติการวิเคราะห์เอกชน จำนวน ๑๑ ราย ได้แก่

๑) นายคุณากร มั่นชื่น	ทะเบียนเลขที่ ว-๒๐๔-จ-๐๑๙๔
๒) นายชัยมงคล แสนมาตร	ทะเบียนเลขที่ ว-๒๐๔-จ-๐๑๙๕
๓) นายเอกรินทร์ บุดสักที	ทะเบียนเลขที่ ว-๒๐๔-จ-๐๑๙๖
๔) นายพัชชานนท์ อินปริก	ทะเบียนเลขที่ ว-๒๐๔-จ-๐๑๙๗
๕) นายศตวรรษ แก้วกันหา	ทะเบียนเลขที่ ว-๒๐๔-จ-๐๑๙๘
๖) นายวิกรม มีศิริ	ทะเบียนเลขที่ ว-๒๐๔-จ-๐๑๙๙
๗) นายภคนันท์ คำจันทราช	ทะเบียนเลขที่ ว-๒๐๔-จ-๐๒๐๐
๘) นายศิรวิทย์ มิไพทูรย์	ทะเบียนเลขที่ ว-๒๐๔-จ-๐๒๐๑
๙) นายธีรพงษ์ ศรีคำแหง	ทะเบียนเลขที่ ว-๒๐๔-จ-๐๒๐๒
๑๐) นายอภิสิทธิ์ ศรีคงแก้ว	ทะเบียนเลขที่ ว-๒๐๔-จ-๐๒๐๓
๑๑) ว่าที่ร้อยตรี ภาณุพงศ์ แสนศรี	ทะเบียนเลขที่ ว-๒๐๔-จ-๐๒๐๔

อนึ่ง หนังสือฉบับนี้จะสิ้นอายุพร้อมหนังสือต่ออายุรับขึ้นทะเบียนห้องปฏิบัติการวิเคราะห์เอกชน ในวันที่ ๒ กันยายน ๒๕๖๙

จึงเรียนมาเพื่อทราบ

ขอแสดงความนับถือ

(นายศิระ จันทร์เฉิด)
นักวิทยาศาสตร์เชี่ยวชาญ รักษาราชการแทน
ผู้อำนวยการกองวิจัยและเตือนภัยมลพิษโรงงาน
ปฏิบัติราชการแทนอธิบดีกรมโรงงานอุตสาหกรรม

กองวิจัยและเตือนภัยมลพิษโรงงาน
กลุ่มมาตรฐานวิธีการวิเคราะห์ทดสอบมลพิษและทะเบียนห้องปฏิบัติการ
โทร. ๐ ๒๔๓๐ ๖๓๑๒ ต่อ ๒๑๐๓-๕
โทรสาร ๐ ๒๔๓๐ ๖๓๑๒ ต่อ ๒๑๙๙
ไปรษณีย์อิเล็กทรอนิกส์ saraban@diw.mail.go.th



ที่ อก ๐๓๑๐(๑)/ ๖๙๐๘

กรมโรงงานอุตสาหกรรม
ถนนพระรามที่ ๖ แขวงทุ่งพญาไท
เขตราชเทวี กรุงเทพฯ ๑๐๔๐๐

๒๑ สิงหาคม ๒๕๖๘

เรื่อง เปลี่ยนแปลงสารมลพิษที่วิเคราะห์

เรียน กรรมการผู้จัดการ บริษัท เอแอลเอส แลบอราทอรี กรุ๊ป (ประเทศไทย) จำกัด

อ้างถึง คำขอขึ้นทะเบียน/ต่ออายุ/เปลี่ยนแปลงบุคลากร และชนิดสารมลพิษของห้องปฏิบัติการวิเคราะห์เอกชน ลงวันที่ ๒๗ มิถุนายน ๒๕๖๘

สิ่งที่ส่งมาด้วย เอกสารแนบท้ายหนังสือเปลี่ยนแปลงสารมลพิษที่วิเคราะห์ บริษัท เอแอลเอส แลบอราทอรี กรุ๊ป (ประเทศไทย) จำกัด จำนวน ๖ แผ่น

ตามคำขอที่อ้างถึง บริษัท เอแอลเอส แลบอราทอรี กรุ๊ป (ประเทศไทย) จำกัด ห้องปฏิบัติการวิเคราะห์เอกชน เลขทะเบียน ว-๒๐๔ สถานที่ตั้งเลขที่ ๑๐๔ ซอยพัฒนาการ ๔๐ ถนนพัฒนาการ แขวงพัฒนาการ เขตสวนหลวง กรุงเทพมหานคร ขอเปลี่ยนแปลงสารมลพิษที่วิเคราะห์ ต่อกรมโรงงานอุตสาหกรรม นั้น

กรมโรงงานอุตสาหกรรมพิจารณาแล้ว ให้บริษัท เอแอลเอส แลบอราทอรี กรุ๊ป (ประเทศไทย) จำกัด เพิ่มขอบข่ายชนิดสารมลพิษที่วิเคราะห์ในน้ำใต้ดิน สิ่งปฏิกูลและวัสดุที่ไม่ใช้แล้ว และดิน ตามสิ่งที่ส่งมาด้วย

อนึ่ง หนังสือฉบับนี้จะสิ้นอายุพร้อมหนังสือต่ออายุรับขึ้นทะเบียนห้องปฏิบัติการวิเคราะห์เอกชน ในวันที่ ๒ กันยายน ๒๕๖๙

จึงเรียนมาเพื่อทราบ

ขอแสดงความนับถือ

(นางสาวปัทมวรรณ คุณประเสริฐ)
ผู้อำนวยการกองวิจัยและเตือนภัยมลพิษโรงงาน
ปฏิบัติราชการแทนอธิบดีกรมโรงงานอุตสาหกรรม

กองวิจัยและเตือนภัยมลพิษโรงงาน
กลุ่มมาตรฐานวิธีการวิเคราะห์ทดสอบมลพิษและทะเบียนห้องปฏิบัติการ
โทร. ๐ ๒๔๓๐ ๖๓๑๒ ต่อ ๒๑๐๓-๕
โทรสาร ๐ ๒๔๓๐ ๖๓๑๒ ต่อ ๒๑๙๙
ไปรษณีย์อิเล็กทรอนิกส์ saraban@diw.mail.go.th

เอกสารแนบท้ายหนังสือเปลี่ยนแปลงสารมลพิษที่วิเคราะห์
บริษัท เอแอลเอส แลบอราทอรี กรุ๊ป (ประเทศไทย) จำกัด เลขทะเบียน ว-๒๐๔
ที่ อก ๐๓๑๐(๑)/ ๖๙๐๘ ลงวันที่ ๒๑ สิงหาคม ๒๕๖๘

ขอบข่ายสารมลพิษที่ได้รับขึ้นทะเบียนจากกรมโรงงานอุตสาหกรรม จำนวน ๔๐ รายการ

น้ำใต้ดิน จำนวน ๔ รายการ

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
1	Aluminum	Digestion, Inductively Coupled Plasma/ Mass Spectrometric Method[2]
2	Copper	Digestion, Inductively Coupled Plasma/ Mass Spectrometric Method[2]
3	Iron	Digestion, Inductively Coupled Plasma/ Mass Spectrometric Method[2]
4	Molybdenum	Digestion, Inductively Coupled Plasma/ Mass Spectrometric Method[2]

สิ่งปฏิกูลหรือวัสดุที่ไม่ใช้แล้ว จำนวน 17 รายการ

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
1	Antimony	1) Waste Extraction, Digestion, Inductively Coupled Plasma Method[1,3,6] 2) Waste Extraction, Digestion, Inductively Coupled Plasma/Mass Spectrometric Method[1,3,7] 3) Digestion, Inductively Coupled Plasma Method[4,6] 4) Digestion, Inductively Coupled Plasma/ Mass Spectrometric Method[4,7]
2	Arsenic	1) Waste Extraction, Digestion, Inductively Coupled Plasma Method[1,3,6] 2) Waste Extraction, Digestion, Inductively Coupled Plasma/Mass Spectrometric Method[1,3,7] 3) Digestion, Inductively Coupled Plasma Method[4,6] 4) Digestion, Inductively Coupled Plasma/ Mass Spectrometric Method[4,7]
3	Barium	1) Waste Extraction, Digestion, Inductively Coupled Plasma Method[1,3,6] 2) Waste Extraction, Digestion, Inductively Coupled Plasma/Mass Spectrometric Method[1,3,7] 3) Digestion, Inductively Coupled Plasma Method[4,6] 4) Digestion, Inductively Coupled Plasma/ Mass Spectrometric Method[4,7]

ฯลฯ

Beryllium

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
4	Beryllium	1) Waste Extraction, Digestion, Inductively Coupled Plasma Method[1,3,6] 2) Waste Extraction, Digestion, Inductively Coupled Plasma/Mass Spectrometric Method[1,3,7] 3) Digestion, Inductively Coupled Plasma Method[4,6] 4) Digestion, Inductively Coupled Plasma/ Mass Spectrometric Method[4,7]
5	Cadmium	1) Waste Extraction, Digestion, Inductively Coupled Plasma Method[1,3,6] 2) Waste Extraction, Digestion, Inductively Coupled Plasma/Mass Spectrometric Method[1,3,7] 3) Digestion, Inductively Coupled Plasma Method[4,6] 4) Digestion, Inductively Coupled Plasma/ Mass Spectrometric Method[4,7]
6	Chromium	1) Waste Extraction, Digestion, Inductively Coupled Plasma Method[1,3,6] 2) Waste Extraction, Digestion, Inductively Coupled Plasma/Mass Spectrometric Method[1,3,7] 3) Digestion, Inductively Coupled Plasma Method[4,6] 4) Digestion, Inductively Coupled Plasma/ Mass Spectrometric Method[4,7]
7	Chromium (III)	1) Waste Extraction, Digestion, Inductively Coupled Plasma Method; Waste Extraction, Colorimetric Method; Calculation Method[1,3,6,8] 2) Waste Extraction, Digestion, Inductively Coupled Plasma/Mass Spectrometric Method; Waste Extraction, Colorimetric Method; Calculation Method[1,3,7,8] 3) Digestion, Inductively Coupled Plasma Method; Alkaline Digestion, Colorimetric Method; Calculation Method[4,5,6,8] 4) Digestion, Inductively Coupled Plasma/ Mass Spectrometric Method; Alkaline Digestion, Colorimetric Method; Calculation Method[4,5,7,8]
8	Cobalt	1) Waste Extraction, Digestion, Inductively Coupled Plasma Method[1,3,6] 2) Waste Extraction, Digestion, Inductively Coupled Plasma/Mass Spectrometric Method[1,3,7]

3) Digestion...

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
		3) Digestion, Inductively Coupled Plasma Method[4,6] 4) Digestion, Inductively Coupled Plasma/ Mass Spectrometric Method[4,7]
9	Copper	1) Waste Extraction, Digestion, Inductively Coupled Plasma Method[1,3,6] 2) Waste Extraction, Digestion, Inductively Coupled Plasma/Mass Spectrometric Method[1,3,7] 3) Digestion, Inductively Coupled Plasma Method[4,6] 4) Digestion, Inductively Coupled Plasma/ Mass Spectrometric Method[4,7]
10	Lead	1) Waste Extraction, Digestion, Inductively Coupled Plasma Method[1,3,6] 2) Waste Extraction, Digestion, Inductively Coupled Plasma/Mass Spectrometric Method[1,3,7] 3) Digestion, Inductively Coupled Plasma Method[4,6] 4) Digestion, Inductively Coupled Plasma/ Mass Spectrometric Method[4,7]
11	Molybdenum	1) Waste Extraction, Digestion, Inductively Coupled Plasma Method[1,3,6] 2) Waste Extraction, Digestion, Inductively Coupled Plasma/Mass Spectrometric Method[1,3,7] 3) Digestion, Inductively Coupled Plasma Method[4,6] 4) Digestion, Inductively Coupled Plasma/ Mass Spectrometric Method[4,7]
12	Nickel	1) Waste Extraction, Digestion, Inductively Coupled Plasma Method[1,3,6] 2) Waste Extraction, Digestion, Inductively Coupled Plasma/Mass Spectrometric Method[1,3,7] 3) Digestion, Inductively Coupled Plasma Method[4,6] 4) Digestion, Inductively Coupled Plasma/ Mass Spectrometric Method[4,7]
13	Selenium	1) Waste Extraction, Digestion, Inductively Coupled Plasma Method[1,3,6] 2) Waste Extraction, Digestion, Inductively Coupled Plasma/Mass Spectrometric Method[1,3,7] 3) Digestion, Inductively Coupled Plasma Method[4,6] 4) Digestion, Inductively Coupled Plasma/ Mass Spectrometric Method[4,7]

14 Silver...

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
14	Silver	1) Waste Extraction, Digestion, Inductively Coupled Plasma Method[1,3,6] 2) Waste Extraction, Digestion, Inductively Coupled Plasma/Mass Spectrometric Method[1,3,7] 3) Digestion, Inductively Coupled Plasma Method[4,6] 4) Digestion, Inductively Coupled Plasma/ Mass Spectrometric Method[4,7]
15	Thallium	1) Waste Extraction, Digestion, Inductively Coupled Plasma Method[1,3,6] 2) Waste Extraction, Digestion, Inductively Coupled Plasma/Mass Spectrometric Method[1,3,7] 3) Digestion, Inductively Coupled Plasma Method[4,6] 4) Digestion, Inductively Coupled Plasma/ Mass Spectrometric Method[4,7]
16	Vanadium	1) Waste Extraction, Digestion, Inductively Coupled Plasma Method[1,3,6] 2) Waste Extraction, Digestion, Inductively Coupled Plasma/Mass Spectrometric Method[1,3,7] 3) Digestion, Inductively Coupled Plasma Method[4,6] 4) Digestion, Inductively Coupled Plasma/ Mass Spectrometric Method[4,7]
17	Zinc	1) Waste Extraction, Digestion, Inductively Coupled Plasma Method[1,3,6] 2) Waste Extraction, Digestion, Inductively Coupled Plasma/Mass Spectrometric Method[1,3,7] 3) Digestion, Inductively Coupled Plasma Method[4,6] 4) Digestion, Inductively Coupled Plasma/ Mass Spectrometric Method[4,7]

ดิน จำนวน 19 รายการ

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
1	Aluminum	1) Digestion, Inductively Coupled Plasma Method[4,6] 2) Digestion, Inductively Coupled Plasma/ Mass Spectrometric Method[4,7]
2	Antimony	1) Digestion, Inductively Coupled Plasma Method[4,6] 2) Digestion, Inductively Coupled Plasma/ Mass Spectrometric Method[4,7]

3 Arsenic...

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
3	Arsenic	1) Digestion, Inductively Coupled Plasma Method[4,6] 2) Digestion, Inductively Coupled Plasma/ Mass Spectrometric Method[4,7]
4	Barium	1) Digestion, Inductively Coupled Plasma Method[4,6] 2) Digestion, Inductively Coupled Plasma/ Mass Spectrometric Method[4,7]
5	Beryllium	1) Digestion, Inductively Coupled Plasma Method[4,6] 2) Digestion, Inductively Coupled Plasma/ Mass Spectrometric Method[4,7]
6	Cadmium	1) Digestion, Inductively Coupled Plasma Method[4,6] 2) Digestion, Inductively Coupled Plasma/ Mass Spectrometric Method[4,7]
7	Chromium	1) Digestion, Inductively Coupled Plasma Method[4,6] 2) Digestion, Inductively Coupled Plasma/ Mass Spectrometric Method[4,7]
8	Chromium (III)	1) Digestion, Inductively Coupled Plasma Method; Alkaline Digestion, Colorimetric Method; Calculation Method[4,5,6,8] 2) Digestion, Inductively Coupled Plasma/ Mass Spectrometric Method; Alkaline Digestion, Colorimetric Method; Calculation Method[4,5,7,8]
9	Copper	1) Digestion, Inductively Coupled Plasma Method[4,6] 2) Digestion, Inductively Coupled Plasma/ Mass Spectrometric Method[4,7]
10	Iron	1) Digestion, Inductively Coupled Plasma Method[4,6] 2) Digestion, Inductively Coupled Plasma/ Mass Spectrometric Method[4,7]
11	Lead	1) Digestion, Inductively Coupled Plasma Method[4,6] 2) Digestion, Inductively Coupled Plasma/ Mass Spectrometric Method[4,7]
12	Manganese	1) Digestion, Inductively Coupled Plasma Method[4,6] 2) Digestion, Inductively Coupled Plasma/ Mass Spectrometric Method[4,7]
13	Molybdenum	1) Digestion, Inductively Coupled Plasma Method[4,6] 2) Digestion, Inductively Coupled Plasma/ Mass Spectrometric Method[4,7]
14	Nickel	1) Digestion, Inductively Coupled Plasma Method[4,6] 2) Digestion, Inductively Coupled Plasma/ Mass Spectrometric Method[4,7]

15 pH...

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
15	pH	Electrometric Method[9]
16	Selenium	1) Digestion, Inductively Coupled Plasma Method[4,6] 2) Digestion, Inductively Coupled Plasma/ Mass Spectrometric Method[4,7]
17	Silver	1) Digestion, Inductively Coupled Plasma Method[4,6] 2) Digestion, Inductively Coupled Plasma/ Mass Spectrometric Method[4,7]
18	Vanadium	1) Digestion, Inductively Coupled Plasma Method[4,6] 2) Digestion, Inductively Coupled Plasma/ Mass Spectrometric Method[4,7]
19	Zinc	1) Digestion, Inductively Coupled Plasma Method[4,6] 2) Digestion, Inductively Coupled Plasma/ Mass Spectrometric Method[4,7]

เอกสารอ้างอิง

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ที่ อก ๐๓๑๐(๑)/๘๐ ๑๓

กรมโรงงานอุตสาหกรรม
ถนนพระรามที่ ๖ แขวงทุ่งพญาไท
เขตราชเทวี กรุงเทพฯ ๑๐๔๐๐

๒๖ กันยายน ๒๕๖๘

เรื่อง เปลี่ยนแปลงบุคลากร ชื่อตัวและชื่อสกุลของบุคลากร

เรียน กรรมการผู้จัดการ บริษัท เอแอลเอส แลบอราทอรี กรุ๊ป (ประเทศไทย) จำกัด

อ้างถึง คำขอขึ้นทะเบียน/ต่ออายุ/เปลี่ยนแปลงบุคลากร และชนิดสารมลพิษของห้องปฏิบัติการวิเคราะห์เอกชน ลงวันที่ ๒๑ สิงหาคม ๒๕๖๘

ตามคำขอที่อ้างถึง บริษัท เอแอลเอส แลบอราทอรี กรุ๊ป (ประเทศไทย) จำกัดห้องปฏิบัติการวิเคราะห์เอกชน เลขทะเบียน ว-๒๐๔ สถานที่ตั้งเลขที่ ๑๐๔ ซอยพัฒนาการ ๔๐ ถนนพัฒนาการ แขวงพัฒนาการ เขตสวนหลวง กรุงเทพมหานคร ขอเปลี่ยนแปลงบุคลากร ชื่อตัวและชื่อสกุลของบุคลากร ต่อกรมโรงงานอุตสาหกรรม นั้น

กรมโรงงานอุตสาหกรรมพิจารณาแล้ว มีความเห็นดังนี้

๑. ให้ยกเลิกเจ้าหน้าที่ประจำห้องปฏิบัติการวิเคราะห์ จำนวน ๒ ราย

๑) นางสาวพาฤดี คุณนาน ทะเบียนเลขที่ ว-๒๐๔-จ-๐๑๓๙

๒) นางสาวอรณิช เทียนดำ ทะเบียนเลขที่ ว-๒๐๔-จ-๐๑๗๔

๒. ให้เปลี่ยนชื่อตัวและชื่อสกุลของเจ้าหน้าที่ประจำห้องปฏิบัติการวิเคราะห์ จากเดิม นายอาทิตย์ ศรีเสน เป็น นายรัฐธีร์ ทวีกิจวรพจน์ ทะเบียนเลขที่ ว-๒๐๔-จ-๐๐๔๘

อนึ่ง หนังสือฉบับนี้จะสิ้นอายุพร้อมหนังสือต่ออายุรับขึ้นทะเบียนห้องปฏิบัติการวิเคราะห์เอกชน ในวันที่ ๒ กันยายน ๒๕๖๙

จึงเรียนมาเพื่อทราบ

ขอแสดงความนับถือ

(นางสาวปัทมวรรณ คุณประเสริฐ)
ผู้อำนวยการกองวิจัยและเตือนภัยมลพิษโรงงาน
ปฏิบัติราชการแทนอธิบดีกรมโรงงานอุตสาหกรรม

กองวิจัยและเตือนภัยมลพิษโรงงาน
กลุ่มมาตรฐานวิธีการวิเคราะห์ทดสอบมลพิษและทะเบียนห้องปฏิบัติการ
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บริษัท เอแอลเอส แลบอราทอรี กรุ๊ป (ประเทศไทย) จำกัด

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